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TRADE POLICY PERSPECTIVES: SETTING THE STAGE FOR 1985 AGRICULTURAL LEGISLATION

COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY
UNITED STATES SENATE

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FOREWORD

This document is the result of a solicitation to more than 600 people and organizations for opinions and ideas regarding international agricultural trade. A common thread running through all the contributions is the realization that agriculture is but one vessel on a stormy sea over which it has little recourse except to be as seaworthy as possible. Agriculture has become a global industry in which international conditions affect producers at home. Although agriculture is a large and important part of the U.S. economy, it cannot direct or determine the national economic well-being by itself.

It is imperative that agricultural policy become more flexible in order to adjust to macroeconomic conditions over which it has no immediate control. At the same time, those involved in the industry would benefit by working to make these macroeconomic conditions such as inflation, interest rates, the value of the dollar, trade conditions and relations, tax policy, and regulation as long term and as growth oriented as possible.

We have the benefit of a special contribution from Orville Freeman, Secretary of Agriculture under Presidents John F. Kennedy and Lyndon B. Johnson. He, as well as every other former Secretary of Agriculture, advocates a growth oriented agricultural industry. Acreage reductions and price supports that artificially increase U.S. commodity prices above market changing levels encourage foreign competition and mean a smaller agricultural industry for the United States in the future.

Besides all of the important opinions, assessments, and ideas contained here, one of the most relevant insights this print has to offer comes from what is not said.

Keeping in mind that there were no restrictions or limitations in soliciting views, no author advocates abandoning our overseas markets with retrenchment to a totally domestic industry. In addition, no author contends that agricultural policy can be made without regard for policies in the rest of the world. Some disagreement does occur regarding the specific impact of our domestic price supports on export demand. There is also some disagreement over the appropriate Government role in export assistance. However, the message, loud and clear, is that agriculture wants and needs export markets to prosper.

As we look toward the 1985 farm bill, it is particularly pleasing to think about the opportunity a growth-oriented agricultural industry can present. Producers, especially young producers, could once again be confident of their future on the land and rural America would revitalize along with the agricultural economy. The geopolitical implications are also staggering. Increasing trade, based on sound economic principles, will have positive reverberations for the quality of life around the world.

Americans who lived through the thirties are all too familiar with the affects of decreasing trade. Retrenchment and protectionism prolonged the Great Depression, unemployment, and helped create a feeling of despair that helped push humanity into world war. Surely we will learn from the lessons of history for the benefit of present and future Americans.

We also have the opportunity to help improve the living standards of over 1 billion small farmers in the lesser developed countries [LDC's]. Research shows that increasing the yearly income of these small farmers by just $100 would have staggering effects worldwide. For American farmers, the LDC's are particularly important because they are the only markets where substantial opportunity for expanding exports exists. Increasing trade, especially agricultural trade, has historically improved worldwide well-being and standards of living. These human conditions generally ensure political stability and peace.

It is clear that the 1985 farm bill will spell the rise or decline of American agriculture as we know it today. This print, combined with the first committee print on domestic policy, provides a roadmap of the future. Human knowledge is not perfect, but it would be irresponsible and immoral to legislate on so important an issue without intense study of the best possible information. While not all members of the Committee on Agriculture, Nutrition, and Forestry may necessarily agree with all of the positions taken herein, I believe this print will be an essential addition to our agricultural knowledge base. Dialog regarding future agricultural policy directions can only be enhanced by its distribution and use.

JESSE HELMS, *Chairman.*

CONTENTS

Page
Foreword III
Introduction 1

Perspectives from the U.S. Department of Agriculture:

Agricultural Exports and Trade Policy: A More Integral Part of Domestic Farm Policy, by William G. Lesher, Assistant Secretary for Economics, U.S. Department of Agriculture 7

Perspectives from farmers and ranchers:

Future Farm Policy and Farm Exports, by Robert B. Delano, American Farm Bureau Federation 19
The United States—A Major Wheat Producer and Exporter, by Carl Schwensen, National Association of Wheat Growers 24
National Broiler Council Agricultural Policy Positions 32
National Cattlemen's Association—Policy Statement, by Tom Cook, director, foreign trade 34
National Farmers Organization—Policy Statement, by Charles L. Frazier 36
National Milk Producers Federation—Policy Statement, by Patrick J. Healy 38
The Contention That U.S. Loan and Target Levels Make U.S. Wheat Noncompetitive in the International Market Is A Great Fallacy, by Dan McGuire, Nebraska Wheat Board 43
Higher Value Agricultural Exports—The Way To Go, by C. G. Scruggs, Progressive Farmer 52
U.S. Feed Grains Council—Policy Statement, by Darwin Stolte 54

Perspectives from economists:

Changes in the International Economic Environment Facing U.S. Agriculture, by Philip L. Paarlberg and Alan J. Webb 57
The Evolution of American Agriculture from a Domestic to an International Industry: With Policy Implications, by Leo V. Mayer 70
Future Policy Directions for American Agriculture, by J.B. Penn and William Motes, American Farmland Trust 78
Diagnosing and Treating Farm Problems, by Luther Tweeten 95
Taking Account of Competitive Realities in Designing Future U.S. Agricultural Policies for Exports, by Desmond A. O'Rourke 119
U.S. Food and Fiber—Abundance or Austerity, by Kenneth R. Farrell, Fred H. Sanderson, and Trang T. Vo 124
Agriculture and U.S. Trade Policy, by D. Gale Johnson, the University of Chicago 157
Countertrade: An Alternative Marketing Strategy in Agricultural Export Transactions, by James R. Jones 169
Are Export Subsidies the Answer to U.S. Grain Surpluses? by Jerry A. Sharples 176
Increasing the Payoff on Agricultural Exports: U.S. HVP Opportunities in the 1980's and 1990's, by Patrick M. O'Brien, Economic Research Service, U.S. Department of Agriculture 187
Nontariff Barriers: New Types of Agricultural Protection, by Jimmye S. Hillman 197
A Policy Option for U.S.A. Food and Agriculture, by Dale H. Carley and Joseph C. Purcell 208

Perspectives from agribusiness:

Comparative Advantage in an Interdependent World: The Need for a Realistic Agricultural Policy for the United States, by Orville L. Freeman, Business International Corp 221
The Need for a Federal Agricultural Export Policy, by Steve Kopperud, American Feed Manufacturers Association, Inc 231

Page
Perspectives from agribusiness—Continued
  American Cotton Shippers Association—Policy Statement, by Peter F. Deffly 234
  The Possibility of Decline in U.S. Agriculture—Causes and Alternatives, by William J. Hudson, the Andersons 239
  Agency for International Development—Policy Statement 266
  Making U.S. Agricultural Policy Market-Oriented, by Robbin S. Johnson, Cargill, Inc 273
  The Fertilizer Institute—Policy Statement, by Gary Myers 283
  North American Export Grain Association—Policy Statement, by Joseph Harlow 287
  The Impact of Present Trade Policies and Practices on the U.S. Tobacco Farmer, by Bruce L. Flye, Tobacco Associates, Inc 295
  U.S. Meat Export Federation—Policy Statement, by Allan R. Middaugh 298
A Description of Policy Alternatives 303
Appendix:
  Alternative Policy Tools for International Agricultural Trade, by Ronald D. Knutson and James W. Richardson 307
  Perspectives on Agricultural Trade From Former Secretaries of Agriculture, by Robert J. Tosterud, Senior Economist, Joint Economic Committee 320
  The European Community's Common Agricultural Policy, by John F. Hudson 323
  Foreign Subsidized Competition 329
  Glossary of Agricultural Export Terms 350
  Index of Related References 366

INTRODUCTION

(By Senator Jesse Helms)

This committee print is the second in a series by the Committee on Agriculture, Nutrition, and Forestry dealing with issues and policy options pertinent to the upcoming 1985 farm bill. The first print dealt primarily with domestic farm policy and has received wide review throughout the agricultural community.

The contributions to that first print clearly pointed out that international issues will need to be addressed as part of the 1985 farm bill. The agriculture industry has become global in scope with the production from one-third of our cropland beginning a worldwide journey as soon as it leaves the farm gate.

The papers, commentaries, and opinions included as part of this document represent an effort to bring together, in one place, the cumulative knowledge of many people and organizations active in international agriculture. Of course, not all contributions could be included, and some ideas have probably been inadvertently omitted, but I am very pleased with the outcome of our call for contributions. Distribution of this print can only lead to more informed and better policy decisions.

While reviewing the material submitted, it was readily apparent that we could not look at agricultural trade issues in a vacuum. Study after study revealed that our domestic policies, agricultural and others, have a significant impact on agricultural trade. Consequently, we have included papers that deal with domestic farm policies such as loan rates, target prices, acreage diversion, and grain reserves as they relate to the international setting.

As we look toward reauthorization of basic legislation in 1985, our goals seem clear. Almost everyone involved in agriculture wants the family unit to survive as the prime owner-operator of farm and ranch business enterprises. We want commodity prices that represent a fair return on investment. Our policy must allow for expansion of our domestic and overseas markets so that our agriculture industry can resume healthy growth. Most of us believe that a vibrant agriculture contributes to rural communities and the rural environment and that these constitute positive and vital elements of our Nation's social and moral structure.

With goals so clearly defined and general agreement on them widespread, it seems that governmental policymaking should be an easy task. Unfortunately, major breakdowns occur when it comes to deciding how best to obtain these goals. Even though goals have remained fairly constant over the past half century, agricultural policy is widely perceived as a failure in many respects. Our current policy is essentially the same as that crafted during the 1930's as part of the New Deal depression rescue when massive deflation shook the foundations of the entire economy.

These New Deal policy tools could be used with fairly predictable results before the 1970's. Periodic military conflicts and weather were about the only major unknown factors. Beginning with huge Soviet grain purchases in the early 1970's, and followed by development of large export markets in Europe and Japan, U.S. agriculture experienced a metamorphosis from very little export orientation to one that is now very substantial. This change has altered the effects of historical policy tools which were designed to deal with the domestic markets rather than the demands of a global, highly specialized, and capital-intensive industry.

The challenge in 1985 is to fashion farm legislation that will more effectively address the goals all of us share and to better respond to the needs of a changing industry. In this regard, I wrote to people all over America laying out what I perceive to be the questions and issues about the market situation Congress will face in writing the 1985 farm bill. My letter follows:

> Most important to our farmers is the market environment in which they operate. Today, a very important part of that market is agricultural exports. In order to further explore policy alternatives that relate to trade, the Senate Agriculture Committee intends to publish, as part of the 1985 farm bill series, a Committee print dealing with agricultural exports and farm policy.
>
> Contemporary American agriculture and agricultural marketing has changed dramatically over the last 50 years. One major change has been the growing internationalization of this industry. Today our Nation's agriculture is truly an international enterprise, affected by global developments around the world. Yet Federal farm programs are still based on concepts developed in the 1930's for a very different agriculture sector. At minimum, we must recognize the interrelationship of our domestic and world markets, and design policies accordingly.
>
> Beyond that, we need a comprehensive review of farm policy. Current programs are a patchwork of complicated, sometimes mutually conflicting legislative quick-fixes. Agricultural policy should be more than simply the sum of next year's government program for one commodity plus another. Policy should be broader than that. We need to develop a coherent, comprehensive long-term policy, and the 1985 farm bill provides that opportunity.
>
> We invite farmers, agribusinesses, those with expertise in international finance and trade, the academic community and public interest groups to submit papers on any or all of the following topics:
>
> I. *Export prospects.*—What are the realistic prospects for export market growth in the years ahead? Is the U.S. share of these markets likely to grow or decrease? In the years ahead, which demand pattern will world markets follow—the rapid growth of the 1970's or the flat demand of the 1980's? What would be the overall impact on agricultural export prospects if U.S. domestic policy were to become more market oriented, or if it were to become more production-control oriented?
>
> What are the prospects for increased U.S. exports of high value, value-added products, which have many benefits to the U.S. economy? How can the value-added sector achieve a more favorable comparative advantage in production and trade?
>
> II. *Domestic policies.*—How might domestic farm policies and programs be revised to take into account today's volatile and competitive export markets? Can domestic policies be designed to reflect the fact that a very large portion of U.S. production now goes into world markets? Recognizing that the amount of government funds spent on agriculture in the future will have limits, would these funds be best spent for export promotion or for domestic payments in order to achieve maximum benefits?
>
> III. *Competitiveness.*—How price competitive is the United States in world food and fiber production? What can the United States do to become more competitive? What are other characteristics of competitiveness besides price which relate to U.S. agriculture? Does the United States have a comparative advantage in food production and processing, and where in the U.S. food system is improvement needed? Are there major crops in which we lack a significant comparative advantage, and if so, what set of policies are appropriate for those?

IV. *Export credit.*—Many countries are currently burdened with huge debts and in fact cannot even pay the annual interest charged on their debt. Over the past several years, the United States and other developed countries have offered unprecedented amounts of credit to be used for a variety of reasons, including purchases of agriculture commodities. While credit is an extremely valuable tool for the United States in meeting heavy competition for markets, there is some concern about further increasing debt loads of importing countries. Some analysts believe that a large number of existing loans will need to be rescheduled because the countries will be unable to repay them. If so, it is suggested that large government payments may be required to go to the lender in order to fulfill the guarantee. In light of both significant taxpayer cost for such programs under this scenario and the continued need for credit, what should be the role of export credit programs? What amounts and kinds of credit will be needed from the United States, and how many new or additional purchases result from additional credit?

V. *Strong dollar and other impediments to trade.*—The strength of the dollar has been identified as a major impediment to increased U.S. farm exports. Specifically, how do currency exchange rates affect U.S. trade? Is the dollar likely to continue to be as strong as it has been in recent years, and if so, what can and should the United States do to remain competitive for markets? Further, how is U.S. agricultural trade impacted by existing cargo preference statutes and proposals for domestic content legislation?

VI. *Unfair trade practices.*—Another distortion of world trade is caused by agricultural export subsidies and nontariff trade barriers of other countries. What impact do such practices have on world trade, and what should be the U.S. response? At what point does active countermeasures to other countries' trading practices divert attention from practices in the United States which need modification? Further, are active countermeasures useful?

VII. *Export controls.*—Export restrictions such as the grain embargo imposed by President Carter in 1980 have both short- and long-term impacts on U.S. agriculture. In light of the significant contract sanctity legislation Congress enacted as a consequence of the 1980 embargo, what must the United States do to assure the world we will be a reliable supplier?

VIII. *GATT negotiations.*—Should there be another round of multilateral negotiations under the framework of the General Agreement on Tariffs and Trade, as some have suggested? If so, what should the United States seek in the negotiations, and what might we expect the negotiations to produce? Should the GATT itself be reformulated in an effort to improve its effectiveness?

IX. *Export legislation.*—For the first time in a farm bill, the Agriculture and Food Act of 1981 contained a separate title devoted to exports. Should there be a separate export title again in 1985, and what would be useful to include in it? What should the government's role be in expanding U.S. agricultural exports? How can the role of the private sector be emphasized?

X. *Food aid assistance and markets in developing countries.*—Are the U.S. food aid assistance programs, such as P.L. 480, working effectively to help third world nations build real economic growth, and are they effective now in developing markets for U.S. agriculural products in countries that have experienced economic growth? How can we better encourage real economic growth and develop cash customers, and who are such likely to be in the years ahead? Is the idea of self-sufficiency in food production among developing countries a sound one?

Contributors are invited to suggest proposals or to react to some or all of the specific Federal export promotion proposals listed below:

—offering export insurance, similar to programs in Australia, France, Germany, and Great Britain, where exporters may purchase policies to protect themselves from commercial, political, and market risks;

—modifying USDA export financing regulations so that CCC guarantees may be traded in a secondary financial market, generating savings which could be passed through to the importer (a Grace Commission proposal);

—expanding intermediate export credit for commodity sales to countries on 3 to 10 year terms to bridge the gap between the existing short-term, 3-year CCC credits and the 20 to 40 year credit terms under P.L. 480;

—reauthorizing and funding the Agricultural Export Credit Revolving Fund, currently established but not funded, or an export payment-in-kind program;

—establishing additional credit mechanisms or entities;

—exploring the Japanese model of close partnership between government and business in foreign marketing, such as Export Trading Companies for agriculture;

—negotiating additional bilateral agreements with foreign purchasers to specify minimum amounts of trade or to provide assurances of supply; and

—exploring proposals to establish barter and counter trade as a more effective trade tool.

As to my own views, it seems clear that America's farm policies aren't working—it's time to change them.

Attempts by Congress to support farm income by guaranteeing prices above market levels have resulted in massive surpluses worldwide. Making a profit has become impossible for many farmers and has heaped a staggering debt burden upon their backs. In the process, the taxpayers have been burdened with unacceptable costs, and the soil and water resources of the Nation have been squandered.

Thus, 1985 will be the most crucial year for American agriculture since 1862 when President Lincoln created the Department of Agriculture to spread technology and innovation to the farm and rural areas of that day. As Congress and the administration prepare to write the next farm bill in 1985, it is clear that this Nation's present farm policy is counterproductive and must not be allowed to continue.

We must use the opportunity afforded by the expiring farm legislation to reform agricultural policy and make it market oriented, flexible, internally consistent, long term in design, and sensitive to all elements of the production system.

It can be argued that the farm policies of the past 50 years worked well enough for their time, and that is true. But, circumstances have changed. It is now painfully clear that U.S. agriculture is subject to global business conditions. As a result, present farm policy has become ineffective and disastrously costly. The U.S. farm economy is being bled to death, with adverse effects to the entire U.S. economy. The present approach is not sustainable for farmers, nor for the taxpayers, nor for the Nation. Indeed, U.S. farm policy has become an unacceptable burden on American farmers and the American people.

Efforts to impose Federal regulation on what farmers can produce and market, so as to reduce Federal outlays when price supports are above market clearing levels, have, in a word, failed. Voluntary acreage reductions clearly no longer work and, in fact, actually induce greater production at home and abroad, resulting in greater surpluses, less profits, and thereby increased indebtedness, as well as greater taxpayer costs. To be effective, programs to reduce productive capacity for supply management reasons would need to employ mandatory production controls on each farmer, allowing for a specific amount of actual production and no more. But in a global business environment quota programs don't work either.

To illustrate the problem of a food and agriculture policy based on mandatory production controls on each farmer, one needs only to consider the tobacco program.

Without question, mandatory production controls on tobacco demonstrate that when such policies are combined with Government established prices of commodities above market clearing levels, reductions in quotas are inevitable. Today each tobacco farmer's quota has shrunk so much—33 percent in the last decade—that it is virtually impossible for farmers to realize the efficiencies of production necessary to make profits. The United States has lost market share, and much of the tobacco production capacity of the United States has been transferred overseas. Small wonder that tobacco farmers are now clamoring for reform to allow them to grow more tobacco and to be competitive in the marketplace. They recognize that price supports above market clearing levels result in the destruction of their production potential and the demise of their livelihoods.

Furthermore, the financial burden of the so-called No Net Cost Tobacco Program is becoming impossible for farmers to bear.

Thus, without reforms in the tobacco program, based on market principles, tobacco farmers will be unable to earn the profits they must have to stay in business. In short, the tobacco program, which is the ultimate in quota programs, demonstrates that attempts to regulate production—for the purpose of maintaining prices above market clearing levels—will not work for farmers in our global agricultural economy.

Because this program has become the basis for the structural organization of much of the farming in the South—and hundreds of thousands of families are dependent upon the existence of the tobacco quota system—I believe the poundage quota system should continue for that particular crop.

However, to set agriculture on the correct path in the new global business environment, we must make unequivocal transition to market orientation in all farm programs—including the tobacco program.

The miracle of America is our free enterprise system. No other nation has been blessed with such abundance and prosperity. That is because no other nation has relied so consistently on the principles of free enterprise. I propose that we return to those principles to correct the farm policy crisis facing the American farmer, and our food and agriculture production system.

In the coming weeks I will continue working on a farm bill that will establish the principles of free enterprise in farm programs. We will propose a course of market orientation to restore profitability to U.S. agriculture. Such policies will enable America to once again become competitive with an economically and environmentally sustainable agricultural production system. We can thereby help feed a hungry world, and increase the real wealth of people everywhere.

We are now at a crossroads in American agriculture. I urge all who are interested in agriculture to work with me as we chart this new course for America's future agriculture policy.

If we have the courage and good sense to live by the principles of free enterprise that made ours the greatest Nation the world has ever known, we will see a renaissance of growth, profits, and sustainability in U.S. agriculture that will astound the world. But we must get busy now—all of us.

PERSPECTIVES FROM THE U.S. DEPARTMENT OF AGRICULTURE

AGRICULTURAL EXPORTS AND TRADE POLICY: A MORE INTEGRAL PART OF DOMESTIC FARM POLICY

(By William G. Lesher)*

The decade of the 1970's has brought several new challenges to traditional farm policy. The greatest challenge is the growing interdependency between U.S. agriculture and the world economy. The export market, the factors that affect it, and the ability of U.S. agriculture to adjust to these factors are the major forces that will determine the future of U.S. agriculture. The size and economic prosperity of U.S. agriculture and its related industries will be largely determined by the role U.S. agriculture plays in world markets.

The United States has been a significant factor in world agricultural markets for some commodities, but the last decade has generated a much larger and broader economic dependency on exports. The U.S. share of world trade in the major agricultural commodities increased dramatically during the decade, but the real dependency on export markets is reflected in the magnitude of acreage expansion and the share of U.S. production which was actually exported. Export markets have not grown in recent years, but the influence of exports on farm prices of grains, oilseeds, cotton and a number of specialty crops has not diminished.

While the increased dependency is clearly evident for each commodity, two developments warrant special attention. First, the total planted acreage for just corn, soybeans, wheat and cotton increased by 72 million acres during the 1970's to satisfy the growing export market (Table 1). This expansion reflected acreage adjustments among commodities in addition to returning over 50 million acres of previously idled acreage to production. By 1979–81 the United States was exporting nearly 60 percent of its wheat and soybeans, over half of its cotton and nearly 30 percent of its feed grains. The growth in the export market was absorbing the expansion in acreage as well as the 20 percent gains in productivity that occurred over the decade of the 1970's. However, if we cannot sustain and expand that export base in the future at the same rate as productivity growth in domestic output, the acreage and the capacity of the agribusiness sector that support it may not be needed. This has great implications for employment and the economic well-being of many rural areas.

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*Paper prepared by William G. Lesher, Assistant Secretary for Economics, U.S. Department of Agriculture, for inclusion in the Senate Agriculture Committee Print on Agricultural Exports and Farm Policy.

TABLE 1.—U.S. EXPORTS AND PLANTED ACREAGE OF SELECTED COMMODITIES

	Percentage of U.S. exports as a share of:		U.S. planted acreage [2]
	World trade	U.S. production	
Wheat:			
1959-61	40.3	50.6	51.7
1969-71	33.6	44.0	52.0
1979-81	45.1	63.9	80.2
1984/85 projected	39.5	58.2	79.5
Cotton:			
1959-61	38.5	44.9	16.2
1969-71	18.8	33.1	12.1
1979-81	34.4	52.4	14.3
1984/85 projected	29.4	45.2	11.0
Corn: [1]			
1959-61	50.5	8.5	76.7
1969-71	46.2	13.2	68.5
1979-81	64.9	30.1	83.3
1984/85 projected	63.5	26.7	79.8
Soybeans:			
1959-61	71.5	29.5	25.2
1969-71	90.0	52.5	43.0
1979-81	60.5	56.8	69.9
1984/85 projected	52.6	50.7	68.2

[1] U.S. share of world trade reflects total coarse grains.
[2] Million acres.

Second, it is important to note that the largest increase in exports as a share of domestic production has come in feed grains. Wheat, cotton and soybeans have historically had a large dependency on exports. However, as recently as 1969–71 we were exporting only about 13 percent of our feed grains. Today we are exporting nearly 30 percent. Feed grains and soybean products represented 40 percent of our trade volume in 1959–61. Today, they represent around 60 percent. This growing export dependency for our Nation's two leading cash crops, which generated over one-third of total crop receipts in the last 5 years, has increasingly tied the well-being of agriculture to the export market. It also has a number of implications for the U.S. livestock sector since that sector must now adjust to not only domestic crop development but world supply and demand factors as well.

In a broader context, the increased feed grain and soybean exports reflect a rising demand for meat in the diets of people around the world. This foreign demand is in part due to population growth, but it is much more sensitive to income levels and the factors that affect income including economic growth, employment and real purchasing power. If our exports are increasingly tied to these factors they are also directly tied to the policies which our trading partners utilize to achieve their domestic economic objectives—fiscal, monetary, trade and domestic farm policy.

This growing interdependency goes well beyond the farm. The input industries, which have expanded their capacity to support the additional cropland and to stimulate productivity gains, are now focusing their future investment decisions on the issue of the U.S. role in the export market. The marketing and transportation sectors have grown as the volume of exports has nearly tripled in the last 20 years and agricultural output has increased over 50 percent. Their current and future investment decisions will also be based on their expectations of future export demand. At the same time, the 20 percent of the U.S. labor force which is employed by agribusiness and other food-related industries will be impacted. Finally, the consumers of this country, who have always had a healthy, safe and reliable food supply and who spend less of their disposable income for food than any other developed country, will be impacted by agriculture's performance in world markets. In the absence of this export market, U.S. agriculture would be reduced to a less efficient capacity and correspondingly higher costs which would have to be borne by the consumer over time.

However, the challenges to farm policy are not simply a matter of recognizing a dependency on export markets. They are based on an understanding of the forces that have been at work over the past three decades to shape this dependency. The following section reviews some of the forces that shaped our export markets during that period and identifies some factors and market realities which will need to be addressed in the coming decades. The final section suggests some broad issues that need to be addressed during the development of the 1985 farm bill.

AGRICULTURAL EXPORTS AND THE LAST THREE DECADES

The value of U.S. agricultural exports increased from an annual average value of approximately $4 to $6 billion in the 1950's and 1960's to a peak of $43.8 billion in fiscal year 1981. The United States has remained the No.1 agricultural exporter with an average export value of around $37 billion over the last 3 years. The United States is also second only to Japan as an importer of agricultural commodities with imports averaging over $16 billion a year over the last 3 years.

Increases in population and income and government policies favorable to trade combined to generate unprecedented growth in demand for farm products after 1950. World population growth over the last three decades added 2 billion people—an 80-percent increase in the number of people to be fed. Even after accounting for the per capita declines in food consumption in parts of Asia, Latin America, and Africa, where population growth grew faster than food consumption, the increase in global food demand associated with population growth since 1950 was probably about 60 percent.

In affluent countries, further growth in income allowed consumers to increase the proportion of their diets made up of livestock products from 10–20 percent in 1950 to 30 percent or more by 1980. This led to stronger demand for feed grains, oilseeds, and other feedstuffs. In addition, income growth in low and middle-income countries led to a shift toward consumption of wheat products, partially at the expense of grains and other staples.

Trade and agricultural policies in many of the largest countries of the world reinforced, and in some cases accelerated, growth in demand for farm products. From the late 1960's and through the 1970's, implementation of policies which expanded the level of food consumption increased substantially and many of the higher income developing countries and lower income developed countries put new or expanded food subsidy programs into place to accelerate dietary improvements. The food policies often focused initially on government food subsidies or procurement and marketing restrictions that kept the prices their farmers received low. Many also eased food import restrictions or subsidized food imports in contrast to earlier efforts to tie local growth in consumption to local production.

The events of the 1970's were a culmination of widespread economic growth that had prevailed since the early 1960's. Whereas population growth was a dominant factor in stimulating food consumption in the 1960's, it was the growing affluence in many parts of the world that permitted key shifts in diets and trade policies during the 1970's that further accelerated demand. However, a number of other forces shaped this rapid growth in trade and they should be focused upon for the purpose of charting the future course of agriculture.

The decade of the 1970's is more likely to be remembered in coming years as containing four significant events which altered world agricultural markets in a way which is only now beginning to be understood. These events had their initial impacts in the 1970's and early 1980's, but their longer term implications are crucial to the formulation of a U.S. farm policy that recognizes the realities of the international marketplace.

Emergence of centrally planned markets.—The first event occurred in 1972 when the U.S.S.R. became a major commercial buyer of grain in the world market by importing 22.5 million metric tons of grain. That represented nearly 17 percent of total world imports. U.S. sales to the U.S.S.R. accounted for 20 percent of total U.S. wheat and coarse grain exports. While import levels varied in succeeding years depending upon their domestic production, the U.S.S.R presence in the world market was permanent and they represented a dominant but uncertain factor in any given year. In the mid-1970's, China also entered the world market creating an expectation concerning the market potential of a country with a population in excess of one billion people.

More recently the Soviet Union and China have used bilateral grain agreements with numerous exporters, including the United States, to moderate some of the destabilizing effects of the variable levels of purchases. However, the role of the centrally planned economies in the growth and instability of world trade cannot be predicted. They accounted for over 50 percent of the growth in the world wheat and coarse grain trade during the 1970's and in 1979–81 they accounted for about one-third of the world's wheat and coarse grain trade. They comprise nearly one-third of the world's population and their policies regarding the consumption levels and diets of their population relative to their productive potential can dramatically alter trade growth.

Adoption of flexible exchange rates.—The second event was the movement to floating or flexible exchange rates in March 1973. This movement was precipitated by the devaluation of the dollar in 1971 and again in 1973. For the decade of the 1970's this was important because the dollar underwent a 30 percent devaluation over the 1971–73 period. U.S. products were suddenly made substantially cheaper in terms of other countries currencies and this greatly enhanced an already strong demand for U.S. products. The pluses and minuses of this floating exchange rate were not recognized until the 1980's when the United States experienced the opposite impacts of a strengthening dollar.

In the longer run, this movement to flexible exchange rates means that changes in fiscal and monetary policy in individual countries can be quickly translated into exchange rate movements and thus into commodity prices. Under the previous fixed exchange rate system, when the dollar was pegged to a fixed price of gold, changes in domestic monetary and fiscal policy in specific countries impacted that countries domestic interest rates, prices, and employment, but not the exchange rates. Now any change in domestic policy has immediate international implications. For agriculture this means not only impacts on export demand directly but potentially adverse impacts on policies originally designed to foster resource adjustments in domestic sectors. For example, acreage reduction programs designed to reduce supplies and support prices will fail if a strengthening dollar and U.S. price support programs are boosting price incentives in other currencies. Producers in those countries will expand production and expand their market share as the United States reduces its output.

The early 1980's provide an excellent example. Between 1980 and 1983 the wheat loan rate, which has become a price floor for wheat much of the time, was increased by 22 percent, about equal to the rate of increase in domestic inflation. If exchange rates had remained fixed, our foreign customers would have experienced a 22-percent increase in the price floor for wheat. But the dollar relative to other currencies was increasing in real terms by over 30 percent on a trade weighted basis. This meant that our foreign customers were observing more than a 50-percent increase in the price floor for wheat. It is not surprising that U.S. export demand weakened. At the same time, our foreign competitors in the export market observed the U.S. willingness to maintain the price floor with increases in Government stock building and acreage reduction programs. Their response was to increase their harvested acreage by 6 million acres while the United States reduced harvested acreage by 8 million acres. U.S. domestic farm policy, which sought to protect farmers against periods of depressed prices, simply could not adjust when the value of the dollar began to rise in response to a change in U.S. monetary policy in 1980 and 1981, the worldwide recession and large capital flows into the U.S. markets.

The U.S. farmer has seen both sides of the exchange rate movement and now recognizes the role such movements play in the international economy. Much of that instability was a function of the pressures that built up under the fixed exchange rate mechanism based on a dollar-gold standard. Having passed through the transition to flexible exchange rates, it does not now appear desirable to return to the rigidities which impaired adjustments in the past.

Emergence of an international financial market.—The third event was the 1973 oil crisis which saw the emergence of an effective OPEC and the development of an international financial market to facilitate large movements of capital. Oil prices tripled in October 1973 and doubled again in January 1974. This rapid increase in oil prices created a massive transfer of wealth from the developed world to the oil-rich nations of the world. That wealth was largely denominated in dollars. The problem for many of the OPEC countries was what to do with this new-found wealth. Additionally, because they were depleting a nonrenewable resource, they needed investments which would assure adequate returns when the resource base was depleted.

The Eurodollar market, which has grown during the 1960's to facilitate European bank lending of dollars, was the vehicle for recycling the so-called petrodollars. The OPEC countries could deposit their dollars in Eurobanks at attractive short-term interest rates until they were prepared to make longer term investments. The Eurobanks, in turn, could then lend funds to the developing countries to help them pay for their oil rather than make other internal economic adjustments. This tremendous liquidity in the Eurobanks and in many industrial countries created an availability of credit never before experienced. Developing country debt grew at a rate of more than 20 percent a year from 1974 to 1983—exceeding the growth in both their combined gross national products and exports.

The seeds of the world debt problem were sown during this period and the world recession brought the debt crisis to fruition. This became a crucial factor for U.S. exports because the 18 major U.S. agricultural trading partners account for more than 60 percent of debt of the countries that now face repayment problems. During the last 5 years, countries such as Mexico, Brazil, Korea, and Nigeria provided the fastest growing markets for U.S. agricultural exports. These countries purchased approximately one-third of U.S. agricultural commercial exports and their share grew over the period. How much of that demand can be maintained will largely be determined by the actions taken to resolve the current debt problems.

The international financial market is also crucial for agriculture over the long term. Significant capital movements can occur over a short period of time and this can affect the rate of growth in trade. Just as large capital inflows can stimulate growth and demand, outflows can slow demand. The international financial system has demonstrated its ability to move capital rapidly and its effects on exchange rates, demand, and agricultural trade are readily apparent.

Embargoes and market credibility.—The fourth event occurred twice during the 1970–80 period. The first, in 1973, was the embargo of soybeam shipments to Japan. The second, in 1980, was the embargo of grain sales to the U.S.S.R. Both events seriously undermined our position as a reliable supplier and fostered the development of significant world competition. The impacts are readily apparent in world trade shares. In 1969–71 the United States accounted for 90 percent of world trade in soybeans. Following the embargo, the Japanese made substantial investments and provided a guaranteed market to Brazil to develop an alternative source of supply, and our market share has since fallen to about 50 percent. With respect to grains, it is clear that our share of world trade in wheat and feed grains has been eroded by our competitors—much of which was fostered by the 1980 Soviet grain embargo. The U.S. share of the Soviet market was reduced from as much as 72 percent to just 18 percent in 1981. It is no coincidence that in 1981 Argentina's harvested area and exports reached record levels. The United States simply gave a substantial portion of the U.S.S.R. market to our competitors. The effects of being viewed as an unreliable supplier are still a problem today.

The longer term problem is reestablishing U.S. credibility—both with trading partners and U.S. producers. In both cases, it will be a matter of years. Five of the eight largest recorded shortfalls and windfalls in world food production and disappearance were reported between 1972 and 1980. With that type of variability, the importer may be willing to pay a premium for reliability or for alternative sources of supply. Embargoes make the importer decision very simple. They promote alternative suppliers. With respect to the credibility of U.S. trade policy in the eyes of the U.S. farmer, it is a matter of changing the rules of the market. Farming is a capital intensive occupation which requires significant initial investment in land and machinery. Weather and the increasingly complex market forces are difficult enough for farmers to assess in making their investment decisions without introducing major shifts in U.S. trade policies.

LESSONS FROM THE 1981 FARM BILL

The wonderful thing about 20/20 hindsight is that many things become obvious. However, when most agricultural economists looked at the time period prior to the 1981 farm bill what they saw was a world economy which was generating a rapid dependence on trade, particularly U.S. commodities. Indeed it appeared that, during the 1970's, the rate of trade growth was accelerating (table 2). Foreign countries were expanding their domestic consumption at a much faster rate than domestic production by increasing imports. The rapid rate of increase in per capita foreign consumption relative to per capita production during the 1970's required a significant boost in U.S. agricultural trade.

TABLE 2.—WORLD AGRICULTURAL PRODUCTION, CONSUMPTION, AND TRADE GROWTH RATES

	Percent of compound annual growth rates		
	1950–80	1950–72	1972–80
World:			
Production	2.70	2.85	2.35
Consumption	2.70	2.85	2.35
Trade	5.30	4.95	6.25
United States:			
Production	2.15	2.05	2.80
Consumption	1.70	1.90	1.20
Trade	6.40	5.50	8.90

TABLE 2.—WORLD AGRICULTURAL PRODUCTION, CONSUMPTION, AND TRADE GROWTH RATES—Continued

	Percent of compound annual growth rates		
	1950–80	1950–72	1972–80
Foreign:			
Production	2.80	2.95	2.30
Consumption	2.85	3.00	2.50
Trade	4.95	4.70	5.65
Per capita production	.90	1.00	.45
Per capita consumption	.95	1.05	.70

The rapidly expanding world market also removed some concerns about the restrictive protectionist trade policies that work to limit imports and protect domestic farmers in countries such as Japan. The United States and the European Community [EC] were expanding production in an effort to meet the growing export demand. During periods of rapid economic growth, barriers to trade weaken in most importing countries. In part, this reflects pressures to increase imports to meet growing domestic demand in an environment in which imports do not threaten domestic employment. The exporters' concern with gaining additional market access and expanding market shares (even at the cost of adopting unfair trade practices such as export subsidies) are replaced during periods of strong demand by a desire to expand output fast enough to meet that demand.

The failure of the assessments made in 1981 reflect: (1) an inadequate evaluation of the transitory and cyclical nature of some of the factors that were driving world demand and (2) the fact that it is simply impossible to accurately forecast an increasing complex, integrated and interdependent world.

The growing U.S. dependency on the export market has been fostered by a combination of events which no one could have predicted. And there is no reason to believe that we will be able to forsee with any accuracy the events that will shape U.S. agriculture in the coming decades.

What we can see is a number of market factors that will continue to play an important role in world markets. U.S. farm policy must enhance agriculture's ability to adapt to the changing market environment. No one can accurately predict whether the dollar will increase or decrease in value as capital flows shift. But we do know that shifts will indeed occur. The mistake would be to formulate a new farm policy with the expectation of a particular shift. For example, in 1981 the farm programs were designed for an inflationary environment with rapidly growing export markets. Our inability to deal with the actual market reality of a worldwide recession, declining export demand and increased production is a direct result of the inflexibility built into our current farm programs.

It is equally difficult to assess the future direction that trade with the centrally planned economies will take. While the U.S.S.R. maintains numerous bilateral agreements, which in the aggregate exceed 25 million tons, their imports have reached as much as 46 million tons. However, we cannot predict their future use of bilateral agreements or their internal decisions on import dependency. Of equal significance are the agricultural developments in China. Since 1980 the Chinese have increased their grain and cotton production by 25 and 75 percent, respectively. They have just recently moved from a cotton importer to a cotton exporter. Some may argue that China will be a competitor not a customer in the future, particularly if U.S. policies establish a price umbrella which provides incentives for internal production instead of trade growth.

Many economists are now concluding that population and economic growth rates into the 1990's will be slower than recent decades. Additionally, many economists have concluded that the world debt situation is likely to remain a dampening factor on world trade. These assumptions may be correct but I would not want to base future U.S. farm policy solely on those expectations. Agriculture's dependence on exports, combined with the emergence of a well integrated international financial market and the shift to a system of flexible exchange rates, has made the sector far more sensitive to fluctuations in domestic and international policy than at anytime in the past. Policy recommendations based on forecasts which assumed no major policy shifts in the rest of the world will simply not be realistic in today's world.

THE CHALLENGE TO FARM POLICY

The decade of the 1970's was a dramatic, expansionary period for U.S. agriculture and the input and marketing industries that comprise important links in the food and fiber system. During this period, there were no doubts about the importance of the export market and the role the U.S. should play. However, since 1980, some have begun to question whether the exposure of the agricultural sector to these new international forces is worth the benefits that accrue to the U.S. economy.

Some have proposed that we turn inward and isolate our agriculture from the international forces. They would seek a solution similar to that of the 1930's, when farm policy was designed to reduce output and support domestic prices above world market levels. Such a policy could require a program to permanently idle a substantial portion of the 70 million acres that came into production in the 1970's to satisfy the export market. Further reductions would be needed if new yield-enhancing technologies expanded productive capacity at a faster rate than the growth in domestic consumption. To idle this much of the farm sector would reduce the overall efficiency of U.S. agriculture. Whether it is a farm, a foundry, or a factory, it is impossible to idle this much capacity without reducing efficiency and increasing costs. The result would be increased prices to consumers, less efficient use of our resources, a reduced level of general economic activity, and fewer farmers.

At the same time, other less efficient producers in the world would expand production to fill the vacuum created by the U.S. departure from the world market. The end result would be more production from the less efficient producers in the world and less production from the more efficient. Total world welfare would be dramatically reduced. The unique comparative advantage that the United States possesses in agricultural production would be untapped and the output, income and employment prospects of the agriculture-related input, transportation and marketing industries would be reduced.

Alternatively, some have proposed the adoption of variants of the two-price system currently utilized by the European Community. Under such a system, the price to foreign customers is reduced below domestic price levels through some type of export subsidy. The basic intent is to maintain the productive capacity of U.S. agriculture by assuring a growing export market through subsidies. Additionally, it would be necessary to implement import restrictions to ensure that foreign commodities do not enter the U.S. economy at the lower world price levels. But who pays for this system? As consumers, the public would pay higher food prices and as taxpayers they would indirectly subsidize foreign consumption. Sectors which use agricultural products as inputs, such as the livestock sector, would be paying higher prices than their foreign counterparts and would have to reduce capacity in line with domestic needs. The principal shortrun benefit accrues to the importers of U.S. products who are subsidized by U.S. taxpayers. Our competitors would, of course, attempt to match subsidies to maintain their market share which would compound the adjustment problem. Additionally, the developing countries, responding to the reduced costs of agricultural imports, could limit their commitment to internal agricultural development.

Others have proposed a continued movement of farm policy toward the marketplace. This approach suggests that many of the imbalances in the international marketplace are the result of policies which prevent market signals from stimulating resource adjustments. If U.S. agriculture is, in fact, the most efficient in the world, then the maximum benefits will accrue if market forces can allocate resources in both domestic and foreign economies.

Under this approach, farm policies would be directed at reducing trade barriers in foreign markets while at the same time ensuring that domestic farm programs have the flexibility to adapt to the new international realities of the marketplace. This approach moves the U.S. and world economy toward a more efficient use of the available resources as international markets begin to signal world resource adjustments and domestic farm policies foster the needed domestic resource adjustments. The basic size and composition of agriculture would be determined by market forces rather than an arbitrary limitation on market size or the magnitude of subsidies.

In summary, while I certainly do not know which approach will be included in the 1985 farm bill legislation, I do believe that it is becoming better understood in the United States that it is important to have a farm policy and an agricultural trade policy that is consistent.

It seems that some farmers in the United States would prefer to become more isolationist, reduce output, produce for only the domestic market, and "get a price for that produce." It appears that others, including some agribusinesses, would like to maintain current price supports and income supplements and subsidize the surplus onto the international market. Still others would prefer to move to a market-oriented domestic farm policy, perhaps with a transition period, and challenge those who subsidize their exports onto the world markets.

While it does not appear to me that a consensus has yet been formed concerning which way to go, it is interesting that all of these broad options contain either directly or implicitly a specific trade policy that is tied to the domestic policy. Whichever option is ultimately chosen will have a significant influence on all of us. Only time will tell which one it will be. The pendulum has not yet come to a rest.

PERSPECTIVES FROM FARMERS AND RANCHERS

FUTURE FARM POLICY AND FARM EXPORTS

(By Robert B. Delano, American Farm Bureau Federation)

Overall domestic economic policy

During the coming months, a host of farm program proposals will be offered as solutions to the farm problem. Most of these proposals are likely to be modified versions or restatements of programs tried since the 1930's. With history as a guide, it is clear that status quo interests do not allow much room for real innovation in farm policy. But, farm policy as an integral part of overall domestic economic policy must innovate if U.S. agriculture is to enjoy future economic vitality and market opportunity and avoid becoming an economic cripple like the U.S. steel industry.

If future farm policy and overall domestic economic policy is not directed toward proeconomic growth goals, farmers will not prosper. Agriculture without economic growth will fast become the new U.S. steel industry, requiring more and more Government protection while its markets are lost to foreign competitors.

Farmers do not expect to have their economic interests improved by taking from other productive sectors of the economy through permanent dependence on taxpayers. Farm Bureau members understand that Government cannot create economic wealth. Government only redistributes wealth.

Past fiscal policies of ever-higher Federal spending and taxation, accompanied by inflationary monetary policy and burdensome Federal regulations, led to steadily declining national productivity and zero economic growth in the U.S. economy during the late 1970's.

Thus far, financial markets have not been convinced that Congress will put the Nation's Federal fiscal house in order by reducing Federal nondefense spending and entitlement transfers as a share of GNP. Until Congress acts decisively to reduce spending, interest rates will remain under upward pressure.

The markets know that massive entitlement transfers promised by Congress over the years will be paid for by higher taxes, more inflation, or both. Lenders will continue to demand interest premiums in the face of the risk that Congress will revert to past practices to increase taxes rather than basic reforms in spending. Major tax hikes in 1982, 1983, and again this year, verify the suspicion in financial markets. As a result, interest rates have and will continue to remain high. Farmers will have to live with high interest rates unless there are basic spending reforms by Congress.

A growing United States and world economy without inflation is essential to the economic health of U.S. agriculture. Long-term U.S. real economic growth can only be achieved by limiting Federal spending and taxation, reduced regulations on the private sector, freer international trade and sound monetary policy. Policies which violate these fundamentals will not bring long-term economic growth and higher living standards for farmers or any other group.

Progrowth domestic economic policy must be based on market incentives to work, produce, save, and invest. Domestic farm policy must be changed in order to fit with these overall economic policy goals.

Future farm policy

Given the failure of incremental tinkering with the 1930's style farm policies and the major economic and political problems with mandatory controls, future farm policy must unleash, rather than restrain, the international comparative advantage of U.S. farmers and the great U.S. agricultural industry that supports them.

Future Federal farm programs must allow efficient producers the market income opportunity to adopt new technologies if we are to maintain the comparative advantage of U.S. agriculture in foreign markets.

A progrowth U.S. farm policy would more fully use U.S. agriculture's resources, give farmers better access to markets and reduce taxpayer costs for farm programs.

A key component of the 1985 farm law will be how future loan rates for major export commodities are determined—by an automatic formula or by the political process. Farm Bureau favors an automatic formula tied to market prices.

Future loan rate determinations will decide, to a major extent, whether the United States is committed to a progrowth agriculture. It will determine the seriousness of the United States for regaining and increasing the U.S. share of the world market. The loan rate procedures written into the 1985 farm law have the opportunity to put a little more uncertainty in the production and marketing expansion plans of our competitors in the world market. Future loan rate determinations will decide whether U.S. taxpayers and consumers are going to underwrite the farm programs for Canada, the EEC, Australia, Argentina, Brazil, and other competitors.

Future loan rate calculations for major export crops will determine whether the United States is going to produce and use or produce and store and try to enhance farm prices by acreage reduction programs. Acreage reduction programs are only short-term, stopgap measures. They can no longer enhance U.S. prices, given the production capacity throughout the world and the response of foreign customers to higher U.S. prices.

Loan levels as a percentage of the moving average of the farm price for the immediate past years is desirable since it would reflect more recent market behavior. A loan thus determined would show a lag with respect to the most recent market behavior. On the other hand, such a procedure would provide a tradeoff of the two desired but conflicting concerns—stability and flexibility.

Tying loan rates to the market price for all major export commodities, would constitute a major change in U.S. farm policy change.

The next most useful farm policy change toward more market direction would be to abolish the Federal farmer-held grain reserve. The farmer-held, Government-managed, grain reserve has been a convenient administrative tool that postponed, but did not avoid, the farm program cost issue. In the process, wheat and feedgrains have been kept out of trade channels in favor of storage in an effort to prop up unrealistic Government price levels.

The farmer-held reserve gave a clear signal that the United States would produce and store and ultimately bear the costs of production control programs while our competitors expanded production and increased their market shares of major commodities.

The grain reserve was sold on its political appeal to the world hunger lobby and the need for the United States to be a reliable supplier in world markets. But the reserve has had the opposite effect. It ultimately led to the payment-in-kind program—PIK.

Market oriented loan rates are not compatible with the farmer-held grain reserve. Loan rates set by the market would encourage greater utilization and market expansion of U.S. export crops while discouraging U.S. competitors who do not enjoy our comparative advantage. The farmer-held reserve has discouraged utilization and market expansion and signaled our competitors to produce and sell.

Extending the regular Commodity Credit Corporation loan program for an additional 9 months would be a viable alternative to the Federal farmer-held reserve program.

Target price levels must be reconciled in order for farmers to contribute to controlling Federal spending and in making sure our competitors do not get a signal that because of our target price guarantees, in conjunction with the reserve program, the United States will sooner or later have another PIK.

Proper loan and target price determinations, levels, operations, and elimination of the farmer-held reserve will build markets, make better use of our resources, and increase farm income.

Budget considerations and farm policy

The central challenge we all face is to define farm markets for major commodities and develop policies that accommodate these market realities.

The approach that now dominates farm policy discussions and headlines is to start with the cost of programs and develop farm products that meet preconceived ideas on spending. This approach ignores market realities and, in essence, is what we have had through farm laws and farm program administration since 1977. If we focus only on farm program costs, those interested in more reliance on markets for farm income will lose.

Starting with the budget will lead some lawmakers to conclude that mandatory controls are the answer. This will not work for significant economic and political reasons.

Trade policy

All countries, including the United States, impose policies that distort trade. Domestic policy objectives tend to dominate since the trade component in most economies is significantly smaller than the domestic component. Domestic agricultural policies that support farm prices above world market-clearing prices require restrictions in imports and ever-increasing export subsidies.

For U.S. farmers to fully take advantage of the world market, it is imperative that the United States does not pursue protectionist polices in agriculture and industry. If we are going to continue to improve living standards, we must export and we must also import. Trade is necessarily a two-way street. It is in the best interest of U.S. farmers to have farm trade policies that are based on the supposition that we have a comparative advantage in agricultural products in world commerce. We must be prepared to enter foreign markets actively.

Over the last few years, conditions of a stronger than normal dollar, increased competition from foreign producers, trade barriers, sluggish overseas economic growth and a significant rise in imports from abroad have led many Americans to call for new protectionist measures. But, moving toward more protectionism and erecting trade barriers will not increase U.S. farmers position in the world marketplace. Past experience has shown us that retaliation would increase among our trading partners. Agricultural products would become more expensive. We would buy less from our trading partners. They would buy less from us. More jobs would be destroyed than protected. The world economic pie would shrink and overall standards of living for all the world's people would decline. A strong economy and higher living standards are not possible with protectionism.

Over the last several years U.S. farm exports have declined—on a tonnage basis—at an average annual rate of about 4 percent per year. During this same period of time the exchange value of the dollar has reached record highs. Many have complained that the dollar is too strong—that it is overvalued in relation to other countries' currencies, that this overvaluation is causing the decline in U.S. farm export sales, and that the U.S. Government should act to bring the dollar down.

There is no question that the dollar's appreciation has made imported goods highly competitve in our markets, and made it more difficult for our farmers to compete abroad. But, currency intervention is not the answer. Currency intervention will not work for two reasons. First, Government controls on currency, like any other Government interference with market mechanisms, will reduce the efficiency of the market and will harm our longer term growth prospects. Second, there is very little that farmers can do to cause exchange rates to move in their favor. Intervention in currency markets to alter the dollar's foreign exchange value has proved fruitless in the past—it simply does not work.

What can and must be done is to reduce the Federal budget deficit by reducing Federal spending and maintaining the discipline of monetary policy so as to bring and keep inflation and interest rates down.

U.S. agriculture can no longer be viewed as being independent from the rest of the domestic and world economies. The economic well-being of farmers is very much dependent upon the United States and world economic situation. It is becoming increasingly more important that policymakers realize that general trade policy has a direct impact on farm export trade. The success or failure of farm policy is largely dependent upon the soundness of general trade policy.

The United States is in a world where many countries have policies to stabilize internal domestic prices and consumption. Such policies often inflict economic adjustments onto more market-oriented economies like the United States. Recently, pressure has been put on U.S. policymakers to devise protectionist policies for the United States to help counteract the ill effects of other countries' domestic policies on our markets.

We must not only be competitive in price but also in export financing. We believe that innovative CCC credit and Public Law 480 programs should continue as a means of meeting expert financing competition and to develop markets for U.S. agricultural products especially in developing countries.

Two basic choices confront the United States. Move toward more trade protection or continue to advocate liberalization of trade in farm and nonfarm products for those who wish to accept the benefits of international trade. From an economic viewpoint, there is really only one choice if the goal is more economic freedom and higher living standards worldwide.

Concluding comments

If embargoes, cargo preference, domestic content, inefficient longshoremen work rules, import quotas on autos and steel and other interventions in nonfarm and farm product markets continue, U.S. farmers' markets are in deep trouble.

If trade policy in the United State continues to drift toward protection in farm and nonfarm product markets, we can't expect better export opportunities for major U.S. export crops.

If monetary policy continues to be made by looking backward to see where the economy went, guessing where it is headed, and then guessing about money supply creation, farmers will be whipsawed.

If taxes are raised to balance the budget, the economy will weaken. The deficits will increase. Farmers cannot sell T-bones, porkchops, and even chicken breasts to unemployed workers. As go the fortunes of the rest of the economy, so go the income prospects for farmers. It is not the other way around.

The problem is not too little taxation. The problem is too much spending relative to the productive capacity of the private sector. Unless nondefense spending is reduced, we cannot expect interest rates to return to more reasonable long-term levels.

Even if we do all the right things by way of new farm law, it will be for little value if fiscal, monetary, trade and regulatory policies are not favorable. Farm policy must be in harmony with general economic policy objectives, including the objectives of freer world trade, increased economic growth and higher living standards.

THE UNITED STATES—A MAJOR WHEAT PRODUCER AND EXPORTER

(By Carl Schwensen, National Association of Wheat Growers)

Since the midseventies, the United States has produced a yearly average of 2.5 billion bushels of wheat. Considering that acreage reduction programs have been in effect for 5 of these years, and many acres have never been planted but are available for wheat production, the production capacity of the United States is quite large and certainly well above 3 billion bushels per year. Even with acreage reduction programs, U.S. production has increased, as have year-end supplies (see table 1). At the same time, excess stocks have been building over the last three seasons, and exports as a percentage of U.S. wheat production have been declining.

WORLD WHEAT TRADE AND THE ROLE OF THE UNITED STATES

World wheat trade has stagnated the past 4 years at about 100 million metric tons [mmt] per year. While the overall level of wheat trade has remained approximately the same, the world market share held by the United States has declined from 48 percent in 1981–82 to 38 percent in 1983–84. Historically, the United States should range between the 42- and 47-percent level. At current export levels, America is losing a minimum of 4 to 7 mmt [150 to 250 million bushels] of exports per year.

REASONS FOR DECREASED U.S. WHEAT SALES

Four major factors contribute to this decline in U.S. market share: The relative value of the dollar, the world recession and debt load carried by many of our trading partners, world oversupply of wheat, and competition.

The U.S. dollar has appreciated considerably over the past several years. Since the fourth quarter of 1980, the dollar buys approximately 40 percent more German marks, 59 percent more British pounds, 83 percent more francs, and 13 percent more yen. The rise against other currencies, such as those of developing nations, has been even greater.

It is estimated that the rise in the value of the dollar in 1982 alone cost the United States $3 billion in lost agricultural exports and added another 20 million tons to our year-end grain stocks. One study has shown that a 20-percent rise in the dollar causes a drop of 16 percent in farm exports.

The dollar appreciation creates special problems in those countries which have the greatest potential for long-term U.S. export potential—the less developed countries [LDC's].

These nations react to a price increase to a greater degree than more developed nations. In addition, many of these nations carry heavy debt loads, valued in U.S. dollars.

Many LDC's have reduced imports in order to conserve funds for debt servicing, while at the same time increasing exports in order to gain hard currencies. This heavy debt load, and the current world recession, have placed these nations in a short cash flow situation. Thus it is not surprising to find that since 1981 wheat production in developing countries has increased 7.7 percent overall, and 12.4 percent in those with low incomes. At the same time LDC's have decreased their imports from the United States by over 14 percent.

Expanded production in LDC's, years of excellent weather in many parts of the world's wheat growing regions, and increased government production incentives by other nations have caused world wheat availability to increase substantially. Tables 2, 3, 4, and 5 provide a review of foreign production and disappearance. It is important to remember that the United States is the only major wheat growing nation that has implemented production controls and has held excess stocks off the market.

COMPETITION

With increased production by our competitors, their reluctance to maintain reserves, and world wheat trade stabilizing competition between the major exporters [United States, Canada, European Economic Community, Australia, and Argentia] has become fierce. Unfortunately, the statistics show that the United States is losing in this competition.

Argentina is suffering financial problems and has a simple but effective means of selling all the wheat it produces. Argentina simply cuts the price and consistently sells below the export price of all other competitors.

Canada and Australia offer incentives for buyers. They not only provide credit to buyers but they also cut prices. At times, Australia will offer bonuses. That is, for every so many tons purchased, an additional ton will be provided free of charge. Both countries also offer other inducements, such as providing the money and expertise to build storage and handling facilities for a nation as a part of the selling package. Both countries have also engaged in the practice of selling lower priced feed wheat which is and has been used, as milling wheat.

The EEC also has an effective means of advancing wheat sales. The government simply subsidizes the export price and sometimes the shipping cost as well.

It is well to remember that each of our competitors uses a government marketing agency for the selling of their grain overseas. The United States still relies on an open market.

It has been suggested that the United States lower its loan in order to meet the competition and force domestic and overseas adjustments. This has several major pitfalls. First and foremost is that the United States sets the world price through open market transactions. The U.S. price is the world price. A lower U.S. price only means that other nations will follow the price decline and the

United States will not gain any market share. The result would be a substantial reduction in the value of U.S. sales, and therefore, a decline in export earnings.

Second, anything less than a drastic cut in the U.S. loan price can be more than offset by the relative value increase in the dollar. A lower loan but a strong dollar continues to translate into a higher realized price to the foreign consumer, and stronger earnings for the foreign competitor.

It has been argued that a lower loan will cut world production. Such action is unlikely in the near term. Wheat production is "institutionalized" in many nations, and lower prices will not force farmers into other crops unless the price disparity between crops (or livestock production) becomes quite large. Also, many countries encourage, through domestic policies, a trend toward self-sufficiency or endeavor to push production to the extent of their export capacity. A lower U.S. loan would do nothing to offset these policies.

Any new U.S. export assistance programs must be accompanied by a commitment to use these tools to counter our competitors and increase our market share. We must not be intimidated by competitors who now employ special arrangements to capture sales and erode the U.S. position in world wheat trade. Programs accompanied by timidity will not yield beneficial results.

It is evident that the United States has entered a period of surplus stock accumulation, much of which will be acquired by the U.S. Department of Agriculture's Commodity Credit Corporation [CCC] through farmer loan forfeitures. These excess stocks will cause the Government to incur long-term costs, unless they are effectively used to improve our export performance. Government ownership of wheat can reasonably be expected to mushroom from today's 210 million bushel level to as much as 1.1 billion bushels by the end of the 1986 season. Logic demands that action be taken now to forestall a new generation of Government inventories which could mirror those of the 1960's. Farmers, domestic and foreign consumers, and the U.S. Government will benefit from such actions.

INITIATIVES TO INCREASE U.S. WHEAT EXPORTS

The prospect is that sharp competition over wheat sales will continue among the wheat exporting countries in the next few years. The goal of U.S. wheat export policy should be to recapture a larger share of the market and also rekindle some expansion in world wheat trade (see table 6).

U.S. wheat producers have over 35 years experience in developing and expanding export markets around the world. Under today's intense competition and with government treasuries committed to the promotion of wheat exports in the other wheat exporting nations, we feel that it is urgent that a major effort be made. Our experience also indicates that these recommendations deal with the problems and merit careful review by U.S. policymakers.

EXPORT ENHANCEMENT

Our policymakers need to face the fact that our competitors do engage in price-cutting practices in spite of what they may be willing to say officially. To counter the price-cutting practices that Canada, Australia, Argentina, and the EEC regularly employ, we recommend the establishment of an export enhancement program designed to use Government-owned wheat stocks to facilitate commerical sales by combining bonus bushels with regular purchases. This program would utilize excess U.S. stocks to respond to the various practices now used by our competitors to grab an increased market share. Such a program also has obvious market development implications, as it would enable the United States to use its surplus to assist importers during a period of economic recession. The payoff would be both immediate, in terms of additional sales, and long term in as much as satisfied customers would turn to the United States for regular commerical purchases as economic conditions improved.

A mechanism would need to be established to insure that the benefits of this program are fully passed on to the buyer. CCC-owned wheat available for this program might actually reach 370 to 420 million bushels over the next 4 to 6 months. This proposal should be carried out with the Secretary of Argiculture given flexibility in setting the bonus level.

Our policymakers also need to be aware that any program of this sort will bring whimpers from our competitors. If our Government does not have the stomach to stick with such a program for a reasonable period of time and give it a fair trial, then it would be best not to try it at all.

IMPROVED EXPORT CREDIT

Another major step needed to increase wheat exports is an improved export credit program. We need to be able to offer increased amounts, longer repayment terms for selected countries and improved timeliness in setting up country programs.

We are now essentially limited to two credit programs: Public Law 480 and Generals Sales Manager 102. The Blended Credit Program has largely been emasculated by the State Department and the Office of the U.S. Trade Representative. The Public Law 480 Program is very concessional but a bureaucratic morass with too many Departments and agencies involved in programming. The 50-percent cargo preference requirement is one well-documented problem that appears almost impossible to solve. Another less well-publicized problem is the uneven and inconsistent self-help requirements placed on Public Law 480 title I recipients. Some countries, such as Jamaica, are expected to make major commitments on what they will do, while with other recipients the self-help requirement is of little meaning. This provision gives the bureaucrats another opportunity to tie up the program and minimize its effectiveness as a market development and food relief tool.

In this regard, the existence of the 4-million-ton food security reserve should not be overlooked. Current law provides that 300,000 tons of this reserve supply can be used annually for emergency relief, although this authority has not been exercised since the establishment of the reserve. Certainly, Congress intended this provision to be utilized, and conditions have and currently do exist which justify the use of this assistance authority.

The GSM-102 credit program—which is a U.S. Government guarantee of private commercial loans—has expanded rapidly the last 2 years in responses to the world recession and the price-cutting practices of our competitors. At the start of fiscal year 1984, USDA requested $9 billion in GSM-102, based on a careful worldwide analysis of needs. This request was nearly double the fiscal year 1983 level of $4.8 billion. The starting figure in the budget for fiscal year 1984 was $3 billion, which OMB later reluctantly raised to $4 billion, and recent legislation has increased it to $4.5 billion. The level of the program not only needs to be raised, but the flexibility also needs to be increased so that loans can be offered on a more timely basis. Sales have been lost this last year because of OMB's foot-dragging in raising the program levels. Our competitors have not been bashful about moving in with credit to capture sales that we could have won.

A new initiative that would be helpful in dealing with the timeliness problem would be to establish the GSM-102 on a revolving basis. This could be viewed as a line of credit that a country could count on over several years. However, the level of the program would still need to be increased above the current level or the value of the revolving aspect would be minimal.

A further critical need is to establish an intermediate credit program for commodity sales and the establishment/improvement of facilities for long-term market expansion. Intermediate credit terms of 7 to 10 years would be extremely useful for countries such as Brazil and Peru that are struggling with heavy debt loads and where the 3-year repayment under GSM-102 is inadequate. This program would be a useful bridge between Public Law 480 and GSM-102, and it would also offer a graduation step for some Public Law 480 recipients as their economies improve. Intermediate credit to build or improve facilities would offer the opportunity of increasing long-term market opportunities and also counter similar activities by Australia in Egypt and Canada in Brazil. In 1982, AID agreed to assist Egypt in enlarging its port facilities at Safaga on the Red Sea. Unfortunately, this activity was more attuned to Australia's export interests in Egypt than those of the United States.

One other proposal that has been advanced to promote exports is to offer tax credits to suppliers or banks to lower the effective interest rate that can be offered on export sales. This is an idea that appears similar to assistance offered by the Japanese Government to its companies, but while U.S. banks might respond to this initiative, grain exporting companies are normally not willing to go much beyond 60 days in providing credits. This is an idea that has merit and should be studied, but it is not in shape at this point to serve as a substitute for other programs or offer substantial hope for market expansion.

CONCLUSION

In conclusion, we have advanced several ideas that merit careful consideration, and we also have made suggestions regarding procedures that would improve wheat export sale prospects. After programs and procedures are established, we suggest that USDA be established as the lead agency in agricultural exports. By lodging the operation of these programs in USDA, and streamlining procedures with other interested Departments, exporters and importing countries would be assured of a more efficient and timely response. To have too many Departments involved in the process, as at present, slows down clearances and results in other objectives diluting the usefulness of the programs. One lesson that should have been learned from the experience of recent years is that export sales do best when not saddled with a host of other political and diplomatic objectives. The best conceived programs can fail when loaded with other extraneous baggage. Our policymakers need to begin by honestly answering the question as to how dedicated they are about expanding markets and at the same time using this vital resource in addressing world hunger.

TABLE 1.—U.S. WHEAT: SUPPLY AND USE, 1930–31 TO 1983–84 [1]

Year	Acres (thousands)			Millions of bushels					Exports as a share of production (percent)	World trade (millions of bushels)	U.S. share of world trade (percent)
	Planted	Harvested	Yield (bushels per acre)	Production	Supply	Domestic use	Exports	Carryover			
1930–31	67,559	62,637	14.2	887	1,178	751	115	312	13	820	14
1940–41	61,820	53,273	15.3	815	1,099	680	34	385	4	479	7
1950–51	71,287	61,607	16.5	1,019	1,526	690	345	492	34	892	39
1960–61	54,906	51,879	26.1	1,355	2,747	591	654	1,502	48	1,540	42
1970–71	48,739	43,564	31.0	1,352	2,336	772	741	823	55	2,021	37
1975–76	74,900	69,499	30.6	2,127	2,564	726	1,173	666	55	2,451	48
1980–81	80,637	70,984	33.4	2,374	3,279	776	1,514	989	64	3,458	44
1981–82	88,928	81,013	34.5	2,799	3,791	856	1,771	1,164	63	3,720	48
1982–83	87,427	78,981	35.6	2,812	3,983	931	1,509	1,543	54	3,608	42
1983–84	76,817	61,492	39.4	2,425	3,969	1,180	1,400	1,389	58	3,700	38

[1] U.S. data are on July/June years for 1930/31 and 1940/41. Other data are on June/May years. World trade data are July/June world exports. Data for 1983/84 as of January 24, 1984.

TABLE 2.—FOREIGN WHEAT: PRODUCTION AND EXPORTS, 1930–31 TO 1983–84 [1]

Year	Harvested acres (millions)	Yield (bushels per acre)	Billions of bushels	
			Production	Exports
1930–31	328	14.3	4.7	0.7
1940–41	348	14.9	5.2	.4
1950–51	355	14.9	5.3	.5
1960–61	448	16.5	7.4	.9
1970–71	468	21.8	10.2	1.3
1980–81	514	27.0	13.9	1.9
1981–82	513	26.7	13.7	1.9
1982–83	513	29.0	14.9	2.1
1983–84	500	31.0	15.5	2.3

[1] Area, yield, and production data for 1930–31 are an average of 1930–34. Exports are on a July/June year. Yield is production divided by harvested acres.

TABLE 3.—ARGENTINA, AUSTRALIA, AND CANADA: WHEAT PRODUCTION AND EXPORTS, 1930–31 TO 1983–84 [1]

Year	Harvested acres (millions)	Yield (bushels per acre)	Millions of bushels	
			Production	Net exports
1930–31	58.6	13.3	778	492
1940–41	56.6	16.3	922	310

TABLE 3.—ARGENTINA, AUSTRALIA, AND CANADA: WHEAT PRODUCTION AND EXPORTS, 1930-31 TO 1983-84 [1]—Continued

Year	Harvested acres (millions)	Yield (bushels per acre)	Millions of bushels	
			Production	Net exports
1950-51	51.6	16.6	859	451
1960-61	46.9	20.0	938	597
1970-71	37.6	21.3	802	834
1980-81	67.7	20.5	1,389	1,158
1981-82	74.6	24.4	1,817	1,207
1982-83	77.6	23.8	1,844	1,351
1983-84	82.0	26.5	2,172	1,499

[1] Data for 1930/31 are 1930-31 and 1934-35 averages. Exports are on a July/June year. Yield is production divided by harvested area. Data for 1983-84 are forecasts.

TABLE 4.—EUROPEAN COMMUNITY (EC-10): WHEAT PRODUCTION AND EXPORTS, 1930-31 TO 1983-84 [1]

Year	Harvested acres (millions)	Yield (bushels per acre)	Millions of bushels	
			Production	Net exports
1930-31	34.9	24.0	838	([2])
1940-41	34.3	24.4	837	([2])
1950-51	31.7	26.8	848	([2])
1960-61	31.8	34.3	1,091	-337
1970-71	29.4	45.8	1,347	-225
1980-81	31.1	65.1	2,024	+383
1981-82	31.2	64.0	1,998	+448
1982-83	32.1	68.4	2,197	+406
1983-84	32.5	67.1	2,180	+385

[1] Data for 1930/31 are 1930-31 to 1934-35 averages. Some country data for 1940 were missing, so 1939-40 data were substituted. Yield is production divided by harvested area. Exports are on a July/June year and a negative figure indicates net imports. Data for 1983-84 are forecasts.

[2] Not available.

TABLE 5.—WORLD WHEAT AND WHEAT FLOUR S&D TABLE JULY-JUNE YEARS 1979-80 TO 1983-84

[In millions of metric tons]

	1979-80	1980-81	1981-82	1982-83	1983-84 (Feb. 14)	1983-84 (Mar. 13)
Exports:						
Canada	15.0	17.0	17.6	21.2	21.5	21.5
Australia	14.9	10.6	11.0	8.1	11.0	11.0
Argentina	4.8	3.9	4.3	7.4	8.3	8.3
Subtotal	34.7	31.5	32.9	36.8	40.6	40.8
EC-10	10.4	14.7	15.5	15.5	16.0	16.0
U.S.S.R	0.5	0.5	0.5	0.5	0.5	0.5
Others	3.2	5.5	3.6	5.5	4.6	4.6
Total non-United States	48.8	52.2	52.5	58.3	61.9	61.9
United States	37.2	41.9	48.8	39.9	38.1	38.1
World total	86.0	94.1	101.3	98.2	100.0	100.0
Imports:						
EC-10	5.3	4.5	4.7	3.7	4.3	4.3
U.S.S.R	12.1	16.0	19.5	20.2	20.0	20.0
Japan	5.6	5.8	5.6	5.8	5.6	5.5
East Europe	6.1	5.9	6.3	4.3	3.9	4.1
China	8.9	13.8	13.2	13.0	11.0	11.0

TABLE 5.—WORLD WHEAT AND WHEAT FLOUR S&D TABLE JULY-JUNE YEARS 1979-80 TO 1983-84—Continued

[In millions of metric tons]

	1979-80	1980-81	1981-82	1982-83	1983-84 (Feb. 14)	1983-84 (Mar. 13)
Imports—Continued.						
Others	48.1	48.1	52.0	51.2	55.1	55.0
World total	86.0	94.1	101.3	98.2	100.0	100.0
Production:						
Canada	17.2	19.2	24.8	26.8	26.9	26.9
Australia	16.2	10.9	16.4	8.9	21.4	21.4
Argentina	8.1	7.8	8.3	14.5	11.7	11.7
EC-10	48.8	55.1	54.4	59.8	59.3	59.1
U.S.S.R.	50.2	98.2	80.0	86.0	80.0	78.0
East Europe	27.6	34.6	30.6	34.7	34.4	34.6
China	62.7	55.2	59.6	68.4	80.0	81.0
India	35.5	31.8	36.3	37.5	42.5	42.5
Others	59.3	65.1	63.8	67.7	66.4	66.2
Total non-United States	365.6	377.8	374.2	404.3	422.7	421.4
United States	58.1	64.6	76.2	76.5	66.0	66.0
World total	423.7	422.4	450.4	480.8	488.7	487.4
Utilization:						
United States	21.3	21.1	23.3	25.4	32.1	32.1
U.S.S.R.	114.8	114.7	102.0	105.7	94.5	94.5
China	71.6	69.0	72.8	81.4	91.0	92.0
Others	236.1	237.8	247.4	256.9	263.0	263.7
Total non-United States	422.5	421.5	422.2	444.0	448.5	450.2
World total	443.8	442.6	445.5	469.4	480.7	482.3
End stocks:						
Total foreign	56.3	53.7	53.8	55.0	66.8	64.2
U.S.S.R.: Stock charge	−13.0	−1.0	−3.0	0.0	5.0	3.0
United States	24.5	26.9	31.7	41.9	37.8	37.8
World total	80.8	80.6	85.5	96.9	104.5	102.0

Source: Prepared or estimated on the basis of official statistics of foreign governments, other foreign source materials, reports of U.S. agricultural attaches and foreign service officers, results of office research, and related information.

NATIONAL BROILER COUNCIL AGRICULTURAL POLICY POSITIONS

The National Broiler Council supports the following agricultural policy positions, recognizing that the continuing debate on the 1985 farm bill will likely result in a modification of expansion of these positions:

1. The National Broiler Council supports a market-oriented agricultural policy, while recognizing that it is not feasible to achieve fundamental reform of a 50-year policy on a short-term basis. However, the 1985 farm bill should represent a significant movement toward aligning current commodity programs with market realities.
2. Price supports should not be set above market clearing levels. Although it may be desirable to protect farmers from unreasonably low prices, supports should not be used to shelter inefficient producers.
3. It becomes increasingly important for our domestic farm programs to reflect the realities of a world economy. The United States encourages increased competition abroad when our domestic farm supports are above market clearing levels and when embargoes damage our reputation as reliable suppliers of agricultural commodities.
4. Future farm policy must recognize and separate Government price supports for commodities and Government income support for producers. Current farm policy tends to link social and economic programs for agriculture. This linkage often results in distorted market signals as well as inflated prices to the users and consumers of grains, dairy products, and certain other basic commodities.
5. Rigid price support levels established in the 1981 farm bill produced record surpluses and Government support outlays. Future farm support programs should not only be less costly, but also more flexible in order to encourage producers to adjust to changing market conditions.
6. The farmer owned grain reserve was originally established as a supply assurance device, but its subsequent use has been to enhance prices. Current grain reserve policies are not fair to producers of livestock and poultry or to consumers. A cap should be applied to limit the entry of eligible commodities, and release prices should be more realistic and sufficiently staggered to assure that supplies will be available to the market when needed.
7. Two-tier pricing systems for commodities that result in export prices being lower than domestic prices are basically unfair to U.S. consumers and domestic users of agricultural commodities and should not be a part of the 1985 farm bill.
8. Programs designed to benefit one commodity often have an adverse impact on other commodities—particularly nonsupported commodities. In view of the fact that almost two-thirds of gross

farm revenues in the United States come from commodities not directly covered by farm programs, a special effort should be made to avoid any action on behalf of a supported commodity that could prove harmful to nonsupported commodities.

9. It should be recognized that a sound and balanced economic program—including reduced Federal deficits, lower interest rates, a continued low rate of inflation—would have a more positive impact on all agricultural producers than any farm program that can be devised by government.

NATIONAL CATTLEMEN'S ASSOCIATION—POLICY STATEMENT

(By Tom Cook)*

The National Cattlemen's Association recognizes the extreme importance that international trade policy has on our industry. This can apply to red meat trade and grain trade policy alike.

Our industry is relatively new in addressing trade policy as compared to other agricultural commodities. However, in this short period, 10 to 15 years, we have come to recognize the complexities of trade policy.

The National Cattlemen's Association is a charter member of the U.S. Meat Export Federation. This organization has the responsibility of market development and product promotion of red meat in foreign markets. I refer you to a letter to you from Mr. Alan Middaugh, president, U.S. Meat Export Federation, dated July 30, 1984. This letter is in response to your inquiry. I took the liberty of forwarding your letter to us on to him. His letter expresses many of the views of the National Cattlemen's Association.

We do believe potential for exports of beef and beef products does exist. Our biggest challenge will be to overcome access and regulatory restrictions. Many of our most potential markets now impose restrictive quotas, high tariffs, and numerous health and sanitary regulations. The recent trade negotiations with Japan on beef is an example of the difficulty to enter new markets.

We believe we are and will continue to be competitive on the world market for certain beef and beef products. High quality grain fed beef is an excellent example. Other areas sometimes overlooked include live cattle, by-products, variety meats, semen, and embryos. The high tariffs, surcharges, and levies does negate some of this competitiveness.

UNFAIR TRADE PRACTICES

Fair treatment on trade is essentially all we ask for. Make the game rules reasonable and we as an industry will take our chances in competing.

One area of extreme concern to us is the export policies of the European Community. We cannot tolerate its exports of beef on the world market accompanied with its generous export subsidies. For example, subsidized Irish beef is currently being imported into Canada. This is causing undue pressure on Canadian cattle interests and subsequently displacing disproportionate amounts of Canadian beef into the United States.

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*Director, Foreign Trade, National Cattlemen's Association.

EXPORT CONTROLS

While we do not anticipate export controls on beef, we do occasionally get threatened with moves to control hide exports. The National Cattlemen's Association is opposed to export controls of any kind. Contract sanctity is a step in the right direction to assure our customers we are an will be a reliable supplier.

I am not able at this time to address many or all of the questions in your letter. However, as the debate progresses, we will attempt to be prepared to participate in those which are of importance to us.

NATIONAL FARMERS ORGANIZATION—POLICY STATEMENT

(By Charles L. Frazier)

Since statistical reports and technical explanations are generally available from within the Government I think it may be most helpful to reflect our opinions and our best judgment on some of the most important issues. Said in another manner, it may be of more value to express the impressions or the manner in which our people perceive our export policies than to engage in a discussion of alternatives or detailed modifications of current policy.

Some of the foreign delegations who have visited our office in Washington advise in candid fashion, that they very well intend to protect their positions in the export markets. We do not expect any substantial shift in buying patterns. The United States will probably continue to be a residual supplier.

Our people believe that continuing to operate with a large Federal Government deficit, dependence upon high interest rates to draw even more dollars from abroad and perpetually squeezing our efficient mid-range farmers with high costs of production and relatively low prices spells financial disaster in the farm communities. Under these circumstances, we believe it would be unfortunate for the policymakers in this country to dwell further on the advantages of becoming more market oriented.

Those are buzz words generally originating in the industry, that simply call for lower prices on our products in order that they may bid for more sales abroad and move high volumes at their usual margins of profit. Our farm people are sorely pressed for markets and better prices but many of them have come to understand that in all likelihood we cannot regain the rate of increase in exports experienced in the 1970's. We may pick up extra sales from time to time when bad weather in other parts of the world suddenly create a new or additional market, but we cannot expect that some of our funds in the international community can afford to surrender to us export markets that are vital to their own economic well-being.

As a consequence, we reluctantly conclude that a program should be devised in 1985 that will aid producers in balancing their production with what the market will take and result in profitable prices. We do not like production controls any better than anyone else, but we do not seem to have viable alternatives.

We regard proposals to increase the value added sector as an effort to channel some of our markets to higher priced products. This may attract the limited funds available in the Third World countries for food purchases to the more expensive items that we may offer. Again our perception of this shift in policy leads us to believe it would be a mistake. There is more to gain in market development by continuing to move raw products and encouraging our overseas buyers to develop their own industry, jobs, and any means of improving their incomes in a way that will make them better customers and more reliable trading partners.

NATIONAL MILK PRODUCERS FEDERATION—POLICY STATEMENT

(By Patrick J. Healy)

On behalf of its member dairy cooperative marketing associations across the country and their dairy farmer owners, the National Milk Producers Federation is pleased to comment on the impact of international trade on agriculture.

We need to develop a coherent, comprehensive long-term policy, and the 1985 farm bill provides that opportunity. Too often in recent years we have seen major policy decisions impacting on the agricultural economy with little or no consideration given to that impact. Too often the tendency has been to deal with problems in the agricultural economy without due regard to the interrelationships involved.

AGRICULTURE AND THE INTERNATIONAL ECONOMY

Although some sectors of American agriculture have long relied on international markets for sale of a substantial portion of their produce, the rapid expansion of agricultural exports during the 1970's has introduced broad new elements to agricultural policy.

The initial reaction was generally positive and the expanded markets were welcome as a major opportunity for expansion of production and increased export earnings which benefited the entire economy. There has been a tendency, with an eye to the experience of these years, to see export expansion as the answer to the economic problems confronting agriculture. As in most things, it is neither that easy nor that simple.

As important as these markets have become, it must be recognized that political decisions of others will affect their maintenance and growth. Economic factors outside what is normally considered the realm of agricultural policy will play a major role. Within the United States, competing political forces have, and again may force, actions not wholly consistent with the needs of agriculture.

Some have applied the term "internationalization of agriculture" to the events surrounding the growth of export markets. This condition has introduced new elements of concern. Increased reliance on markets abroad poses the risk of greater instability in domestic markets. The need to provide assurances of reliable supply imposes the need for greater sensitivity in policymaking outside agriculture.

EXPORT PROSPECTS

In the current environment, a number of factors outside the scope of traditional agricultural policy considerations will have a major influence on the level of agricultural exports. The strength of the dollar, the ability of developing nations to meet current commitments and to continue or to develop as markets for American farm products, and the policies of competitors in these markets must be included in this list.

Looking at the dairy industry specifically, the United States has not been a major factor in the international market in the past. The Congress has, on several occasions in recent years, attempted to alter this but opposition from both the administration and the international community have resulted in little significant progress.

Lack of U.S. participation in the world market for dairy products has nothing to do with comparative advantage, currency valuation or other considerations that normally determine trade flow. It is simply a fact that the United States has not employed the "rules of the game" common in that market. Given the continued unwillingness to do so, we see little prospect that the situation will change appreciably in the near future.

COMPETITIVENESS OF U.S. AGRICULTURE

American agriculture is generally regarded as the most efficient food and fiber producing mechanism in the world. Within our own economy it is regarded as a prime example of the efficiencies that can be gained, the productivity increases possible through the application of technology. This combination should provide the basis for an industry that is highly competitive in world markets.

But when the agricultural policy discussion turns to the U.S. position in world markets, the conventional wisdom too often results in a conclusion that the United States has priced itself out of these markets or risks the possibility of doing so due to excessive price support levels. This is an oversimplification that ignores the basic facts of these markets.

In many of these markets, the United States finds itself competing with products assisted by export subsidy programs, products exported under the wing of quasi-governmental trading organizations, or assisted by other devices designed to meet any competitive edge the United States might enjoy.

In addition, events of recent years with respect to monetary policy have served to severely restrict any competitive edge or advantage the United States might enjoy.

A basic problem in this area is the fact that the United States has not employed the same rules of competition used by others.

While the dairy industry has not been a factor in the commercial international market for dairy products on any consistent basis, its situation does illustrate this problem to a substantial degree. The U.S. dairy industry is the largest in the non-Communist world. Its efficiency as measured in production per cow, in the operation of dairy processing plants and in other respects will match or exceed that of virtually any other dairy industry.

But with rare exceptions, U.S. dairy products are not traded internationally. The reason, we are told, is that U.S. milk prices are too high. Current world prices for basic dairy products—butter and nonfat dry milk—translate into a farm price for milk of about $5 per hundredweight, less than one-half the current farm price in the United States.

How is it that other nations are able to operate in this market? The European Community is the largest exporting bloc in the world. They have a milk surplus situation that dwarfs the problem U.S. dairy farmers have been grappling with for the past 3 years. In an effort to address this, the EC announced policy changes in early April which includes a milk price freeze at last year's level. At the time of that announcement, that price level corresponded to $10.58 per hundredweight—substantially below the U.S. dairy price support level of $12.60. That would seem to confirm the argument that the United States is essentially noncompetitive.

The fact is that, in 1980 the target or support price for milk in the Community was $14.60 per hundredweight. In October 1980, the U.S. price support level was set at $13.10. Since that time, the EC has announced milk price increases totaling some 23 percent. The support price in the United States has been reduced by 50 cents. The shift that has taken place represents an escalation of the value of the dollar in relation to the European currency unit.

But even before the dollar escalation priced U.S. dairy products out of the market, they were not competitive. The export subsidy programs used by major trading nations or groups of nations to move their products into the market assured that. The $5 per hundredweight value of milk in the world market mentioned earlier has no relation to the cost of producing milk in most nations. It is the value developed on the basis of these export subsidy schemes.

U.S. policy has not recognized these facts. In the case of dairy products, we have never adopted the "rules of the game" as a means of establishing a competitive position. In too many other instances in agricultural trade, we have allowed competitors to use one set of rules while we abide by another.

IMPORT LIMITATIONS

As part of the initial farm price stabilization efforts, Congress provided authority for the restraint of imports of products if they threatened the effective operation of a domestic price support or similar program. This authority, found in section 22 of the Agricultural Adjustment Act, is an integral part of the domestic farm price stabilization structure. Without the ability to respond to such market incursions, the United States could quickly become the dumping ground for world surpluses and our own price support operations would be borne down with the associated added cost.

Section 22 import restraints were first applied to dairy products in 1953. At that time, the limitations covered a number of basic cheese varieties, and the commonly traded butterfat and dried milk products. On a milk equivalent basis, the imports allowed under these limitations totaled less than 200 million pounds of milk in 1953. Nonquota imports during 1953 raised total dairy product imports into the United States to 525 million pounds milk equivalent.

Since that time, U.S. dairy product imports have expanded substantially. On a milkfat equivalent basis, 1983 import levels were 2,616 million pounds. This does not include the milk equivalent of milk protein products. In 1983, the 159.5 million pounds of casein imported into the United States were equivalent to 5.7 billion pounds of skim milk. Much of this expansion has been fueled by the desire of exporting nations to find an outlet for surplus product. A portion has been through expansion of import restraints as was done under the Tokyo round of multilateral trade negotiations. Since 1953, there has been a gradual expansion of the coverage of section 22 import limits on dairy products until today the only exceptions are soft ripened cheeses and milk protein products of which casein and casein mixtures represent the major volumes.

With respect to the latter items, a U.S. Department of Agriculture examination of the issue in 1981 determined that the costs incurred under the Dairy Price Support Program in 1980 would have been $300 million lower if there had been no importation of casein. Despite this finding and repeated urging of the dairy industry, no action has been taken to reduce these imports. Updating the USDA work, to represent the import expansions that have taken place since 1980, it is estimated that the added price support program costs in 1983 approached $330 million.

It is impossible for the U.S. dairyman to comprehend a policy that, on the one hand, seeks reduction of Government costs through reduced prices and voluntary production cutbacks and, on the other hand, countenances a continued addition to program costs through these imported products.

FOOD AID

For more than 30 years, Congress has provided leadership in the development of programs intended to use the bounty of American agriculture to assist needy people around the world. The Food for Peace Program and the food donations now being undertaken through the expanded authority of section 416 of the Agricultural Act of 1949 are outstanding examples of this work.

These have proven to be sound efforts from both a humanitarian standpoint and as market development programs. Many commercial markets for agricultural commodities today were once major recipients of this food aid. As part of the 1985 farm bill, these programs should be continued.

TRADE NEGOTIATIONS

We have concerns about the prospect of a new round of multilateral trade negotiations under the General Agreement on Tariffs and Trade. Without question the United States faces serious trade problems that must be addressed. If the success of the Tokyo round is to be assessed on the basis of the existing situation, one must seriously question the value of a new negotiation.

The primary impetus for entering the Tokyo round of negotiations was an emerging deficit in the U.S. merchandise trade balance. In 1971, the United States experienced a deficit approaching $5 billion.

Four years after completion of those talks the United States faced a deficit in 1983 of over $69 billion and a deficit in excess of $100 billion is predicted for the current year.

Many reasons can be cited for this increasing trade gap. But before seeking to resume trade negotiations as a means of addressing the problem, the United States must seriously address the development of a trade policy. Too often, past trade negotiations have been held in an atmosphere where the achievement of an agreement, for the United States became the end in itself. The content of the agreement mattered less than the fact of an agreement. Unfortunately, this appears to have been the case in much of what came out of the Tokyo round.

SUMMARY

The ability of American agriculture to compete in international markets is essential to the economic well being of broad sectors of agriculture. The framing of policies that will maintain U.S. competitiveness must fully recognize conditions as they exist in those markets.

THE CONTENTION THAT U.S. LOAN AND TARGET LEVELS MAKE U.S. WHEAT NONCOMPETITIVE IN THE INTERNATIONAL MARKET IS A GREAT FALLACY

(By Dan McGuire, Nebraska Wheat Board)

The 1983–84 crop and marketing years are projected as years of market and market share loss for U.S. wheat and wheat flour exports. The U.S. share of world wheat and wheat flour trade is estimated at 38.8 percent, the lowest percentage in 12 years. And while this negative scenario is unfolding, it must be noted that world wheat and wheat flour trade is projected at 98 million tons, the second highest level in history and hardly a sluggish level of international activity.

Realizing that the U.S. share will fall by 1.7 percent if International Wheat Council projections are accurate, it is significant to examine why Canada's market share is forecast at 21.9 percent, up 2.5 percent from last year; and Australia's share is at 11.2 percent, up 2.4 percent; and the European Economic Community's share is at 15.3 percent, up from the 13.9 percent average level of the past 5 years; and Argentina's share at 7.7 percent is about the same as last year but well above their 5-year average of 5.6 percent.

While the U.S. Department of Agriculture's official reasons for U.S. market and market share loss are stated to be sluggish world demand, improved crop production abroad, more intense competition for import markets and high exchange rates for the U.S. dollar, there is a much more revealing side to the story if one digs into the information deep enough.

USDA's Economic Research Service [FATUS] report for November/December 1983 shows that U.S. wheat exports fell 15 percent in the 1983 Federal fiscal year ending September 30, 1983, with the value of U.S. wheat and wheat product exports falling 19 percent for that period.

It's interesting to note that the same USDA report mentioned above documents U.S. and foreign wheat export prices. That documentation indicates that the price of our major competitor's wheat [Canada and Australia] was priced higher in dollars at the export point than was U.S. Hard Red Winter ordinary (FOB the vessel) off the gulf ports. Considering that each of the three countries [United States, Canada, and Australia] wheat prices were quoted in dollars, one has to question just how much of the U.S. market and market share loss in international wheat trade was actually the result of U.S. wheat being noncompetitively priced in the world market as suggested by Government officials during 1983.

The USDA report also states that—

> Canada, Argentina and the EEC (France) competed intensely with the United States, each attempting to gain market shares through such measures as liberal credit arrangements, subsidy payments, and long term agreements.

Quoting from the report again—

> The two largest U.S. wheat markets in recent years—China and the Soviet Union—did not buy any wheat after January 1983.

Perhaps the statement on China and the U.S.S.R. is the most significant of all or rather the amount of U.S. wheat that the two customers didn't purchase is the significant fact. Also significant is what the USDA report does not say and that is why the U.S.S.R and China purchased 241,116,500 bushels less U.S. wheat in fiscal year 1982-83 than in fiscal year 1981-82. Nor does the report mention that those two markets accounted for 83 percent of the total U.S. wheat export volume reduction of 290,333,700 bushels in the 1982-83 fiscal year.

The USDA-ERS report leaves a glaringly large gap of information as to the reasons the U.S. economy lost approximately 1 billion dollars' worth of export trade in wheat in fiscal year 1982-83. There is no mention of the United States/People's Republic of China textile dispute which not only cost the U.S. export volume loss but also market share loss throughout the period covered by the report and very likely for the long term.

And while mention is made of our competitors achieving market share inroads through the use of bilateral grain agreements, the report makes no comment as to how and why such accomplishments were possible. In the case of the Soviet Union, the market situation is pretty well known and most knowledgeable observers understand that the loss of the Soviet market is directly related to past and current negative U.S. trade policy (embargoes, defacto embargoes, etc.). Combined then with the negative trade developments between the United States and the People's Republic of China in 1983, the accumulated wheat export drop is 83 percent accounted for. Nevertheless, when 1 billion dollars' worth of export business is lost to the U.S. economy, a thorough explanation would seem in order as an essential element in an ERS report on ag export trade.

The report attributes some of our competitors success to "liberal credit programs." The ERS description using the word "liberal" is interesting when one considers that a more accurate description would be "competitive credit programs." It is very likely that the countries successfully achieving export trade using such credit programs consider them competitive, and rightfully so. It is also very likely that the United States would describe such credit programs as competitive instead of liberal if the United States was achieving such successes on behalf of the U.S. economy and balance of trade. Considering the professed commitment to an aggressive ag export trade program, a comprehensive report and explanation on just how competitive the U.S. credit approach is and has been relative to our wheat export competition is in order at this time. Such an analysis is especially timely now because credit and other export assistance programs take on a new and elevated significance in today's trade arena. After all, the United States is struggling to overcome a Government-created image that suffers from lost credibility and in fact the undeniable status of the most unreliable and vacillating source of supply in the world. This current condition lays serious responsibility on the doorstep of the U.S. Government and the current administration.

In attempting to achieve export growth in wheat, the U.S. Government must be forced to deal with the current world situation as it truly exists. Comparing current credit and export assistance programs to past levels is not a valid approach. The programs must be designed to meet and beat the competitors practices even if some officials chose to label the programs "liberal" rather than "competitive." Furthermore, it is ludicrous for U.S. Government officials to list a number of noncompetitive factors and reasons for lost exports without openly discussing the most noncompetitive factor of all: U.S. trade policy.

U.S. commodity loan and target levels are not the reason the United States is noncompetitive in the international wheat arena!

Farmers have been constantly bombarded with statements from USDA, ag economists, politicians and other groups with the erroneous notion that the commodity loan and target price levels in the farm program have been the culprits in the deterioration of U.S. wheat exports. The facts simply don't back up that position.

For every single month of the past Federal fiscal year [1982-83], U.S. wheat export prices have been lower than the export wheat prices of Australia and Canada. And all three countries export price of wheat have been well above the U.S. loan rate. Furthermore, considering that Canadian and Australian wheat prices were further above the U.S. loan rate than U.S. wheat export prices, it's obvious that both Australian and Canadian wheats were less competitively priced than U.S. wheat (see attached sheets with various exporter wheat prices all quoted in U.S. dollars).

If U.S. loan rates were causing U.S. wheat export prices to make the U.S. lose export business, it would be impossible for Canada and Australia to increase their market shares and export business at even higher export price levels. Furthermore, if the U.S. loan rate was such a key ingredient, export prices would not be so far above the loan rate. In fact, the export price of U.S. wheat would not only need to be holding close to the U.S. loan rate but would also have to be causing U.S. export prices for wheat to be higher (not lower) than Canadian and Australian export prices. Official records simply don't substantiate the loan level/export loss relationship and theory. And if economists, administration officials, and politicians want to talk about the strong dollar, they should criticize the Federal Reserve Board and have them change their policy rather than trying to develop a smoke screen that focuses on the farm program and commodity loan rates by suggesting a relationship to export performance.

Realizing that the U.S. exports five distinct classes of wheat, those who wish to point to a U.S. wheat that is higher priced than the competition can use U.S. Dark Northern Spring, 14 percent protein, priced FOB the Gulf of Mexico. Of course, those same individuals will have to admit that spring wheat represents less than 16 percent of total U.S. wheat exports and that DNS 14 percent off the gulf (somewhat out of position) is likely to be naturally higher priced than Canadian No. 1 CWRS, 13.5 percent protein, FOB Thunder Bay. In addition, the USDA and other administrative officials that have blamed loan rates for lost U.S. exports also back up their claims by saying that the world is largely a price market, not a quality market in any case. So pointing to the price of a high protein, high quality wheat doesn't factor largely into total wheat export business during a period when the world is made up of largely price buyers.

Another factor that enters into export competitiveness is freight costs. To put ocean freight in perspective, the International Wheat Council reports that freight rates for a cross-section of origins and destinations for wheat reflects that freight rates for wheat from the United States, has been less than or equal to the competition for supplying the bulk of international wheat demand (see attached IWC charts).

If the attached wheat price and freight rate information was not in U.S. dollars for all countries involved, arguments might be made that the information is not on an equal basis. Such is not the case. The bottom line is that U.S. wheat growers and all U.S. farmers have been sold a bill of goods. Loan rates and target levels are not the cause of the United States being noncompetitive in international markets. Negative U.S. trade policy, the lack of competitive resolve toward providing export financing and credit facilities, the uses of agricultural exports as a sacrificial lamb to appease domestic interests (such as textiles) and catering to the large percentage of the electorate by allowing (if not causing) a large surplus in efforts to hold down the consumer price index are the true villains in the U.S. export debacle.

For farmers and farm organizations to accept the fallacy of the loan rate/export relationship is to accept the unrealistic notion that farmers deserve lower prices and lower income so that other interest groups can benefit. Farmers cannot continue to accept the advice of those individuals and entities whose motivations are closely directed and shaped by economic interests inconsistent with those of the farmer. No other businessman or group of businessmen in the world would tolerate such a set of circumstances.

UNITED STATES, CANADA, AUSTRALIA EXPORT WHEAT PRICES—SEPTEMBER 1982–SEPTEMBER 1983

[All in U.S. dollars per metric ton]

	Canada [1]	Australia [2]	United States [3]
September 1982	$160	$159	$155
October 1982	159	158	141
November 1982	163	162	157
December 1982	170	167	161
January 1983	167	167	166
February 1983	167	166	165
March 1983	170	169	167
April 1983	170	171	168
May 1983	167	165	163
June 1983	164	163	151
July 1983	163	157	148
August 1983	169	159	154
September 1983	170	159	157

[1] No. 1, CWRS, 13.5 percent protein, in-store, Thunder Bay.

[2] ASW, FOB.

[3] No. 2 Hard Red Winter ordinary protein, FOB vessel.

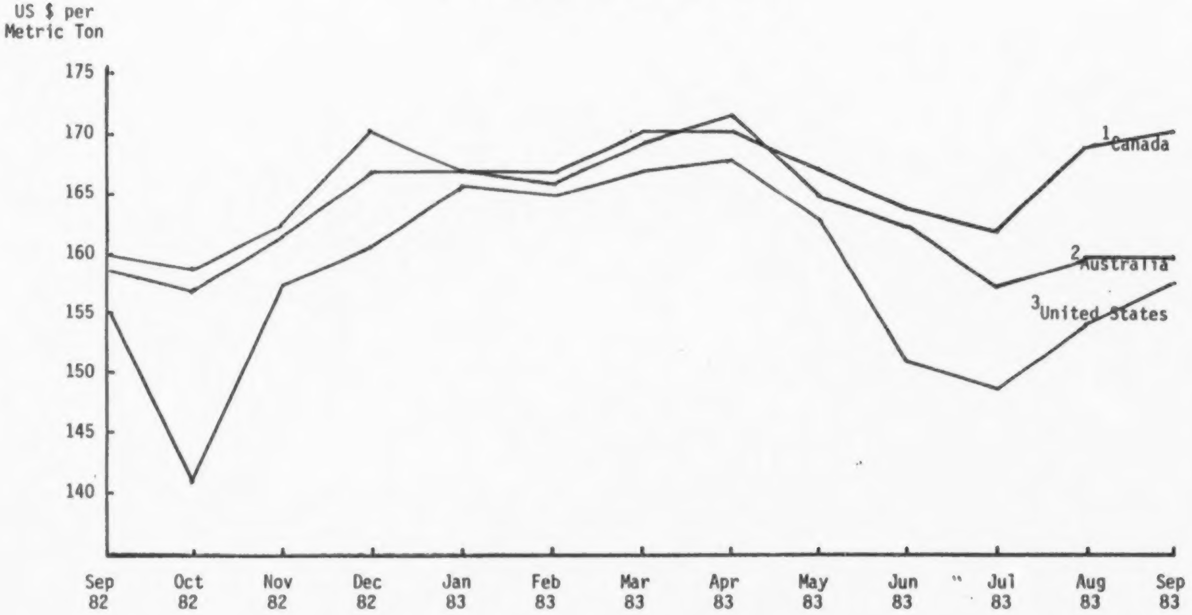
Note—The U.S. loan rate in 1982 was $130 per metric ton and $134 per metric ton in 1983.

Source: USDA–ERS, FATUS, November/December 1983.

UNITED STATES, CANADA, AUSTRALIA

EXPORT PRICES FOR WHEAT
(All in US Dollars)

September 1982--September 1983



1. No. 1, CWRS, 13.5% Protein, in-store, Thunder Bay
2. ASW, FOB
3. No. 2 Hard Red Winter Ordinary Protein, FOB Vessel

NOTE: The U.S. loan rate in 1982 was $130 per metric ton and $134 per metric ton in 1983.

Source: USDA-ERS, FATUS, Nov/Dec 1983

CHART 1
EXPORT PRICES OF WHEAT
MONTHLY: JULY 1982-JULY 1983

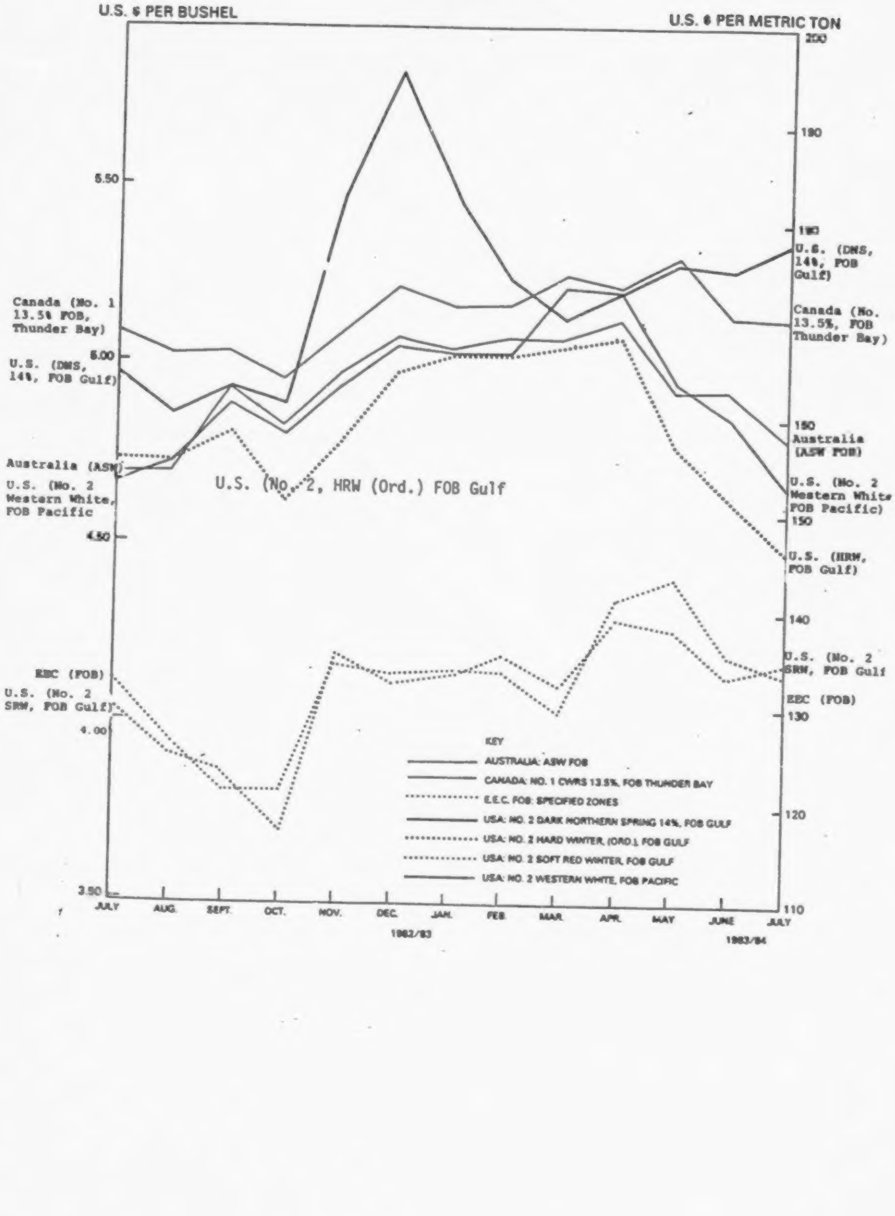


CHART 2
IWC INDICATOR AND EXPORT PRICES (FOB) OF SELECTED WHEATS

MONTHLY: JULY 1980–JULY 1983

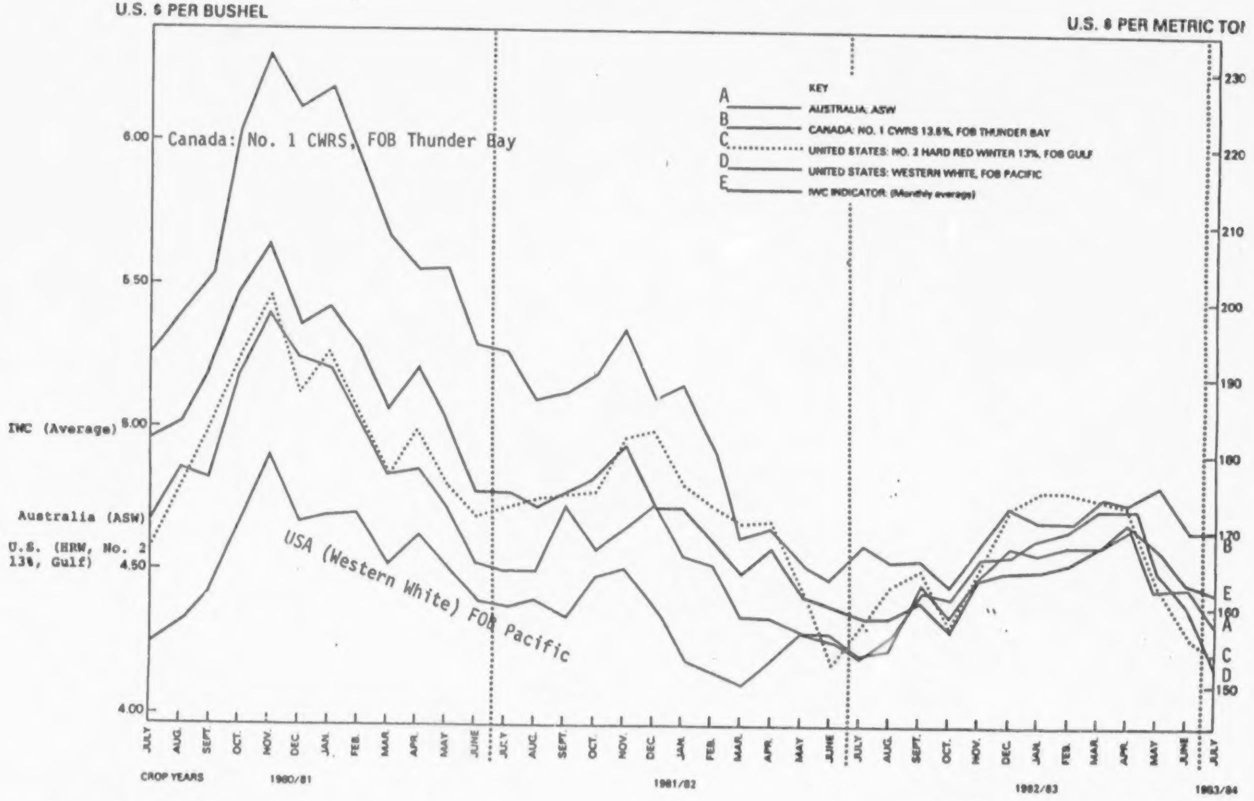


CHART 3

SELECTED OCEAN FREIGHT RATES FOR WHEAT

MONTHLY: JULY 1980-JULY 1983

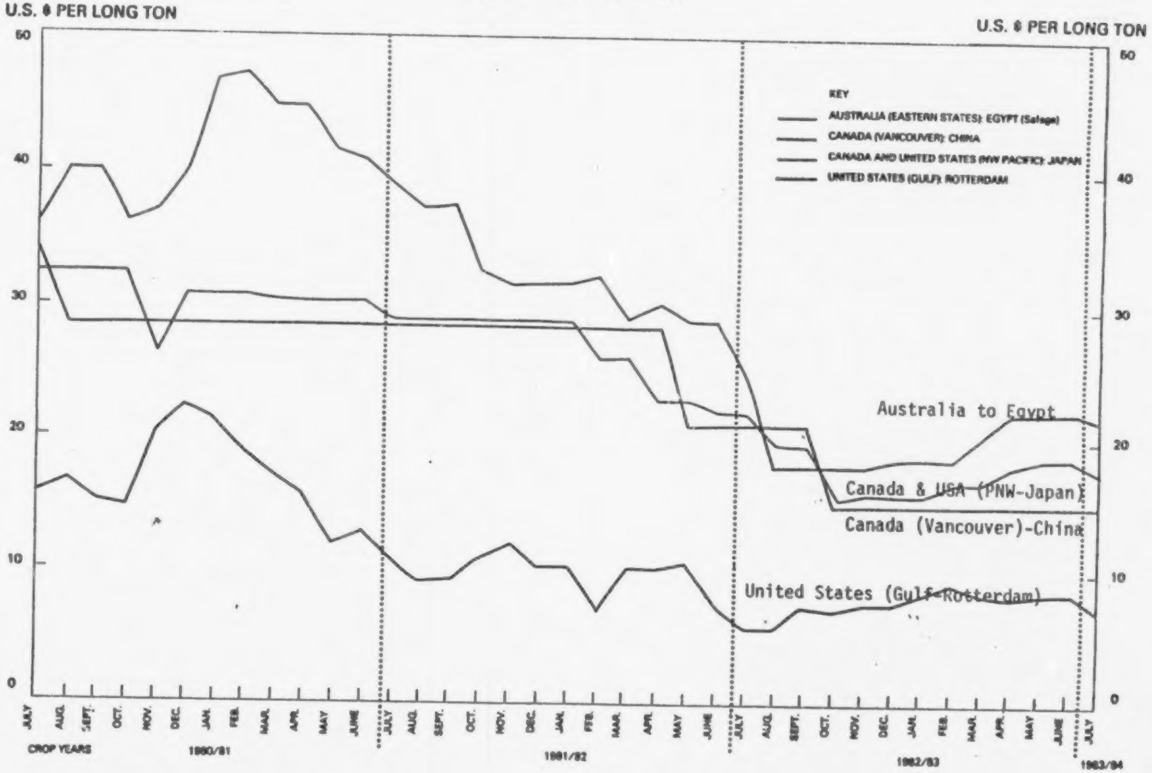
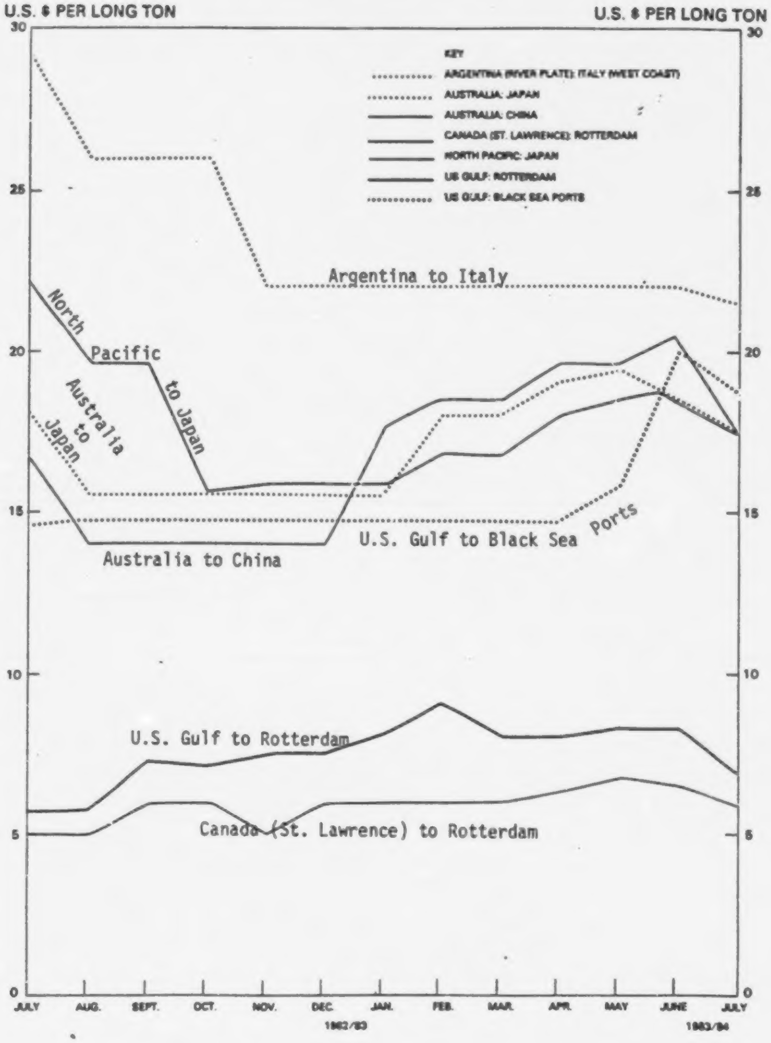


CHART 4
SELECTED OCEAN FREIGHT RATES FOR WHEAT

MONTHLY: JULY 1982–JULY 1983



HIGHER VALUE AGRICULTURAL EXPORTS—THE WAY TO GO

(By C.G. Scruggs, Progressive Farmer)

In the past 15 years, U.S. exports of agricultural products have grown nearly seven times. The net balance of U.S. agricultural trade has jumped more than 12 times.

An incredible record.

But, as American farmers and exporters have learned in the last couple of years the blush is off the export peach. It's getting harder and harder to sell corn, wheat, and soybeans overseas. The dollar volume from agriculture exports dropped almost $5 billion last year.

Obviously something must be done because we are selling nearly one-half of all the wheat, corn, and soybeans we produce overseas.

If profits are to be found in farming we must not only hold all the export markets we now have, we must expand them. That is going to be a harder than ever job. On this all the trade experts agree.

What to do?

There are several viable opportunities. None are quick and easy solutions. None by themselves will give the United States the export gains needed. Laced together they can make a difference.

Here are some suggested items for an export agenda:

> We need to forge a carefully planned overall foreign policy for American agriculture. The days of developing overnight surplus dumping programs for short-term fixes are over. We must now make long-term export marketing plans that will take us into the 21st century.
>
> Every farm and agriculture commodity organization should double their export development funds and efforts. The Foreign Agricultural Service of USDA should be substantially beefed up.
>
> The credo of all farmers and their leaders should be to sell, sell.
>
> Continue to fight against artificial barriers of tariffs, health regulations, et cetera, that stifle trade.
>
> Establish by legislation positions of Under Secretaries for Agricultural Affairs in the Departments of State and Defense. It's imperative that food and agricultural affairs have day-to-day consideration in the development of policies in those crucial foreign policy Cabinet level departments.
>
> Establish a Government sanctioned U.S. Food and Fiber Export Bank. This bank should have an initial capitalization of several billion dollars to finance export purchases of United

States produced and processed farm products. Farmers should purchase on an individual basis at least one-half of the initial capital stock over a long time. The long-range goal should be for farmers to own the bank completely—as they now do the Farm Credit Banks. This would give producers a direct vested interest in exports.

Adoption of the long-range national goal of exporting semiprocessed products with added or higher value instead of only raw, unprocessed products. This does not mean lessening of our efforts to sell raw products. We must do both. But our policy should slowly be shifted from that of shipping bulky, unprocessed grains, beans, and the like to that of shipping flour, beef, pork, chicken, and processed protein-rich foods worth 3 to 10 times as much.

The world needs lightweight, nearly ready-to-eat protein rich foods. Raw wheat, corn, soybeans, et cetera, are costly to ship and subject to terrible waste from insects and other hazards. The dividends from processing these products in the United States would mean thousands of extra jobs in addition to the added income.

Farmers should also take steps to invest in such processing industries so as to share in the anticipated rewards.

By 1990 we should triple the amount of higher value agriculture exports going out from American ports.

Admittedly this agenda for a foreign policy for American agriculture is an ambitious one—and incomplete. Progress will be hard to come by. But, the cost of not doing anything different will be far more expensive—like the possibility of having to take one-third to one-half of U.S. cultivated acres out of production.

U.S. FEED GRAINS COUNCIL—POLICY STATEMENT

(By Darwin Stolte)

Export markets have provided the bulk of market growth for U.S.-produced agricultural commodities during recent decades and will continue to do so for the indefinite future. The U.S. economy has become dependent upon farm exports, and the U.S. worker, consumer, and farmer have generally prospered from this dependency.

Although much of the growth in U.S. agricultural exports over the past two decades has come from factors such as an expanding world economy, burgeoning population, and worldwide demands for better diets, a significant share of the credit for that growth can be claimed by U.S. agricultural market development efforts abroad.

Private sector/Government cooperation in overseas market development.—The United States is fortunate to have a long tradition of Government and private sector cooperation in agricultural development to achieve goals that neither could carry out alone. This unique cooperation has worked especially well in expanding overseas markets through the U.S. Department of Agriculture's export market development cooperator program.

For the past quarter of a century the U.S. Government has entered into contracts with the U.S. agricultural sector to develop markets for agricultural products abroad. Under this program, U.S. farmer and agribusinesss interests organize to fund export market development. The U.S. Government provides additional funding and support to realize this goal. This ongoing private sector/Government cooperation is accomplished through organizations such as the U.S. Feed Grains Council. As evidenced by the growth in agricultural exports over the past quarter of a century, the program has been remarkably successful.

The 1985 farm bill must recognize the vital contribution of this private-sector/Government effort for foreign market development, and renew the U.S. commitment to agricultural growth. The membership of the U.S. Feed Grains Council has set a goal of achieving 83 million metric tons of U.S. feed grains exports annually by 1990. To accomplish this ambitious goal, the Council will need the continued support of Congress in appropriating funding targeted at overseas market development.

Although funding and other support for overseas agricultural market development are vitally important, the ability of export development programs to generate effective demand for U.S. agricultural products ultimately hinges on other factors which decide whether potential demand can be turned into actual exports. Some of these factors are beyond the purview of the 1985 farm bill, but there are three which can be influenced by legislation: export controls, trade policies, and export credits.

Export controls.—Embargos on U.S. food exports are based on the premise that the rest ot the world is dependent on U.S. production and that importing nations can be forced into a course of action by a U.S. refusal to export food to those nations. However, embargos have been repeatedly demonstrated to be ineffective and highly destructive to the interests of U.S. farmers, agribusiness and the overall U.S. economy.

The soybean embargo established Brazil and Argentina as major competitors of the United States in the production of oilseeds. The embargo on grain sales to the Soviets has sharply increased acreage, yields, and production of wheat and feed grains in major grain exporting nations in every year since the embargo, except when weather acted as an uncontrollable deterrent. Once acreage is planted to grain for export, it is seldom shifted back to other uses.

Embargos not only increase competitive supplies and make it difficult to sell to the embargoed customer in subsequent years, they also make it clear to other importing nations that the United States is not a reliable supplier—not because the United States cannot produce an adequate supply every year, but because political decisions can and do disrupt trade, destroying the hard-won confidence of established and potential customers for years to come.

Reestablishing the U.S. reputation for supply reliability will take years of noninterference with exports, but sanctity of contracts legislation that is free of loopholes will do much to assure noninterference and will help to restore confidence. Existing legislation which provides contract sancity should be maintained and strengthened in the 1985 farm bill.

Trade policy.—Trade policy, particularly that which provides export subsidies such as those employed by the European Economic Community, also has a major effect on U.S. exports. Congress can not legislate away unfair trade practices by sovereign nations; rather, every effort must be made to negotiate an end to such practices. Congress can and must provide every support possible to the negotiatiors, and to GATT negotiations to outlaw export subsidies.

Export credits.—Authorizing legislation, legislative history, and the statements of numerous Congressmen are all in agreement that the purpose of export credit programs is to increase agricultural exports. The U.S. Department of Agriculture attempts to use them for this purpose. Every year, however, agencies with a different order of priorities wrest a little more control of these programs from USDA. The only way export credit programs can be restored to full effectiveness as export tools is to return the administration of all of programs to the Department of Agriculture.

> Public Law 480, title I should be used to develop markets and transform countries from concessional to commercial markets, as it was used before the Agency for International Development took over field administration of the program.
>
> Measures to increase funds for Public Law 480 and to allocate funds for the export of foods eaten by the poor in developing countries, such as corn and sorghums, will be of little benefit to feed grain farmers unless USDA can regain the lead role

in Public Law 480 administration and in the allocation procedure.

The Export Credit Revolving Fund offers many advantages, but the principal one would be to remove control of commercial credit program funding from the Office of Management and Budget, and allocation of funds from the Department of Treasury, and give that authority to USDA. This would mean use of the program for the purpose intended—market development.

A new intermediate credit program should be enacted that would provide 3- to 10-year financing for farm commodities to countries which are not eligible for Public Law 480, title I financing, but need longer term credit than that provided by the General Sales Manager (GSM)-102 program. Recently, USDA has been pressured into allocating GSM-102 funding to countries to alleviate their financial problems temporarily, or to serve as an incentive to persuade them to agree to recommendations by the International Monetary Fund. This is a perversion of the purpose of the GSM-102 program, which is to increase export sales of U.S. agricultural commodities. The inevitable rescheduling of payments necessitated by this practice is putting the entire GSM-102 program in jeopardy.

The new intermediate credit program would be targeted to countries which have import potential for U.S. farm products, but lack the foreign exchange to meet all their import needs. The interest rate would be concessional, but much higher than Public Law 480 rates—perhaps three-fourths of commercial rates. The 3- to 10-year terms would also serve as a bridge for developing countries that are moving from the 40-year Public Law 480 terms toward becoming commercial markets.

The GSM-5 direct credit program should be reactivated and funded as a nonsubsidized, self-sustaining program, specifically to serve the needs and meet the competition in creditworthy markets, as it was from 1956 to 1980, when no bad debt losses were incurred.

The GSM-301 intermediate credit program to finance infrastructural development in importing countries should be reactivated and funded. Unless potential customer nations have the port and storage facilities and inland transportation systems to handle imports, they will remain merely potential customers.

To preserve the integrity of all of these credit programs, it is necessary to consider risk in the allocation of financing. In the short term, continued use of the programs, to provide balance-of-payment support to high-risk countries places an unconscionable burden on U.S. taxpayers and robs farmers of markets in countries which are good credit risks. In the long term, it threatens to eliminate a program that is vital to the maintenance and expansion of U.S. farm exports.

PERSPECTIVES FROM ECONOMISTS

CHANGES IN THE INTERNATIONAL ECONOMIC ENVIRONMENT FACING U.S. AGRICULTURE

(By Philip L. Paarlberg and Alan J. Webb)*

Current literature on agricultural trade characterizes the international environment facing U.S. agriculture with three generalizations: (1) that trade plays an increasing role in U.S. agriculture; (2) that U.S. agriculture is increasingly integrated into the U.S. and world macroeconomy; and (3) that price variability for agricultural commodities is increasing (see Duncan and Borowski for one example). These generalizations imply that trade was not, until recently, very important to U.S. farmers and that agriculture has been a sector largely isolated from the rest of the economy. Further, the last statement implies that price variability due to the reliance on exports is a new problem for the sector. The implication of these statements is that the United States needs new policy approaches to deal with this international environment.

A longer perspective, however, shows that these influences are not new, although the magnitude and manner in which these influences affect agriculture may have changed. Except for two or three decades in the middle of this century, trade always has been critical to the well-being of the agricultural sector, agriculture always has been sensitive to developments (shocks) elsewhere in the economy, and prices for farm outputs have always been highly variable. During the 1970's, these factors reemerged, albeit in somewhat different form and magnitude than previously.

Formation of future policies requires an understanding of how U.S. policy and the international environment have interfaced in the past. In this paper, we compare and contrast the international environment facing U.S. agriculture present and past. We separate factors which have reemerged from those which we believe have changed. We then attempt to link the role of trade and the variability in prices to the policy behavior of the U.S. Government. We identify four distinct responses to the international environment by the United States. The first period, up to 1930, we call the limited intervention period. This period is characterized by an important role for trade, variable prices, agricultural linkages to the macroeconomy, and limited public intervention. The next period, 1930–70, we call the strong intervention period. During this period the U.S. Government assumes a major role in agriculture and the macroeconomy; trade's importance to U.S. agriculture shrinks, price variability is reduced, and macroeconomic concerns are few except, perhaps, the costs of farm program costs to the Federal Government. The third period, from 1970–80, we call a withdrawal period. Changes in U.S. Government agricultural and macroeconomic policy in this period allowed the old international environment U.S. agriculture had faced to reemerge. The last period, 1980 to the present, hints at another shift in agricultural policy as policymakers attempt to operate in this reemerged environment. A critical policy issue is what type of public intervention strategy should the United States select? The longer run perspective discussed in this paper shows two contrasting means of reacting to this international environment. One policy allows the domestic market to adjust to changing world market conditions, while the other prevents such adjustment through public intervention. Analysis of the costs and benefits of each policy strategy provides insights for the direction of future policies.

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ROLE OF TRADE

Except for a few decades of this century, trade has always been critical to U.S. agriculture. It has been an important outlet for production, and has been a source of instability for agricultural prices. Figure 1 shows that it is not until the 1970's that agricultural exports as a percent of farm cash receipts regained the levels obtained during the 1910–29 period. Cotton and tobacco were major exports for the United States since the early settlers arrived. Historians argue that one of the major causes of the Civil War was the conflict between the agricultural export oriented South, and the manufacturing protectionist North. One author describes the situation in agriculture as "During and after the Civil War the fluctuations of the currency and the high tariff worked especial hardship on the farmers as producers of staples which must be sold abroad * * *" (Buck, p. 20). This quote illustrates three concerns which sound familar today: (1) currency fluctuations (inflation—exchange rates); (2) high U.S. tariffs (on nonagricultural goods); and (3) the importance of export markets. The recession which hit agriculture in 1921 was largely the result of a decline in exports following World War I as European nations recovered from the war and as a result of overexpansion in U.S. agricultural production in response to wartime needs.

Figure 1

AGRICULTURAL EXPORTS AS A PERCENT OF FARM CASH RECEIPTS

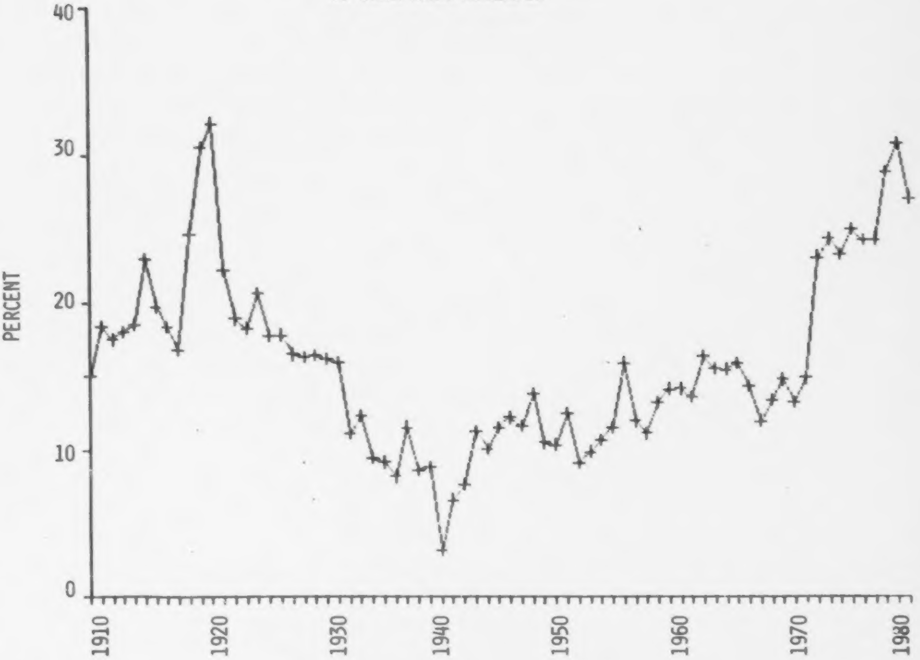

TABLE 1.—AVERAGE SHARE OF U.S. PRODUCTION EXPORTED BY DECADE SINCE 1870 FOR SELECTED CROPS

[In percent]

Decades	Wheat	Cotton	Tobacco	Corn	Soybeans	Rice
1870-79	25.4	64.7	59.1	4.4	(1)	(2)
1880-89	26.9	65.6	45.3	3.1	(1)	(2)
1890-99	30.1	68.6	37.3	5.3	(1)	(2)
1900-09	22.0	67.1	35.4	2.8	(1)	(2)
1910-19	23.5	57.6	37.0	1.8	(1)	16.5
1920-29	26.0	57.5	38.8	1.3	(1)	26.0
1930-39	8.4	50.9	31.4	1.6	[3] 6.7	16.6
1940-49	18.7	23.1	22.4	2.0	2.8	42.7
1950-59	35.9	35.7	23.6	4.5	16.3	49.6
1969-69	53.6	35.0	26.1	12.4	28.1	61.2
1970-79	58.1	41.2	36.7	24.4	38.3	58.9

[1] Soybeans production and trade data not reported prior to 1931

[2] Rice production and trade data not reported prior to 1910

[3] 9-year average used

Source: Agricultural Statistics. Various issues.

Why is it perceived that trade plays an increased role in agriculture? Table 1 shows the average share of production exported for current major U.S. agricultural exports by decade since 1870 on a volume basis. In general there is a U-shaped pattern. Prior to the 1930's, trade was important for wheat, cotton, tobacco, and rice. The trough in the 1930's reflects the tariff wars during the Depression, while the low values for the 1940's reflect the interruption of commerce during the Second World War. During the post-World War II period, the role of trade begins to rise. Wheat exports in the period 1870–1929 averaged 26 percent of production.

During the 1930's that share fell dramatically to 8.4 percent. It was not until after export subsidies and export promotion programs during the 1950's, that the export share of wheat production recovered. In recent years, the export share of wheat production rose to a peak of 58.1 percent in the 1970's, but has fallen slightly in the early 1980's. Similar patterns are evident for corn and cotton. Corn exports in the 1950's were about the same share of production as during the 1870's. In recent years corn exports have risen to 24 percent of production, which is about the same share wheat had in the 1870's. Although cotton exports as a share of production have been rising, exports are still well below the contribution made in earlier periods. Tobacco exports in the 1970's were also higher as a share of production, but were also well below historical levels. Trade appears to be increasingly important to soybeans and rice.

Depending on when the comparison is made and the crop considered, one can view the current large share of production exported as either a fundamental change or a reemergence of what existed before the 1930's. For wheat, trade was always important, but its contribution has been rising. Trade is clearly more important for corn, soybeans, and rice. For cotton and tobacco, exports are less important than they were 50 or 100 years ago.

The figures do suggest some major changes have been going on over the intervening years. Foremost, the mixture of crops exported has changed. Wheat, cotton, and tobacco have given way to corn and soybeans. Unlike the pre-Depression years, the emphasis of U.S. export trade is more toward ingredients for livestock feed. Since meat demand tends to be more sensitive to income changes than is the demand for the wheat, rice, cotton, and tobacco, U.S. trade may be more sensitive to changes in income growth than in the past. Another fundamental change suggested by the tables and figure 1 is that the role of exports in aggregate has strengthened.[1] The decline in the domestic share is because over time the income elasticity for these crops in the United States has been falling due to high per capita incomes, thus current growth in U.S. domestic demand for most crops is largely due to population increases rather than income changes (Chandler).

The data presented in table 1 do disguise one change which is truly fundamental to understanding the present international environment facing U.S. agriculture. During the 1909–12 period the export market for U.S. agricultural commodities was in Western Europe. When that market collapsed after World War I, U.S. agriculture collapsed as well. In 1909–12, 83 percent of our exports went to Europe (excluding the U.S.S.R.), most to the United Kingdom (USDA, Stat. Bulletin 112). Seventy years later, only 28 percent went to Western Europe, while 13 percent went to centrally planned nations, and 36 percent went to developing nations (USDA/FATUS). The shifts in world trade patterns from Europe and toward centrally planned and developing nations is a fundamental change. These nations' demand for food tends to be more income elastic than is the case in Western Europe; hence, imports are sensitive to changes in consumer expenditures. Most of these nations have borrowed in international asset markets to finance imports and their ability to sustain large food imports is suspect as debt servicing problems mount. These nations tend to rely on State trading institutions or more rigid import restrictions rather than private markets, thus, the institutional structure of the market has changed as trade patterns have shifted.

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[1] Weighting the proportion of each crop exported by its contribution to total production shows that corn dominates. Since exports are increasingly important to corn producers, the aggregate role of trade for U.S. crop producers has risen.

Variability in U.S. agricultural prices is a current issue facing U.S. agriculture. As the Buck quote illustrates, except for the middle of this century, variability has been an issue. In the early 19th century increases in export demand for cotton raised prices and stimulated a Western migration of the U.S. cotton industry (North). When supply increases outstripped demand, prices fell, land sales slowed, and producers switched to other crops. Such cycles have occurred frequently and for other crops throughout the 19th and 20th centuries. A similar cycle began in 1972. High commodity prices and an expansionary monetary policy stimulated production increases and raises land values. Recently supply has outstripped demand and prices have fallen.

TABLE 2.—AVERAGE YEAR-TO-YEAR PERCENT CHANGES IN SEASON'S AVERAGE PRICES RECEIVED BY U.S. FARMERS FOR SELECTED CROPS BY DECADE SINCE 1870 [1]

[In percent]

Decades	Wheat	Corn	Cotton	Tobacco	Rice [2]
1870–79	13.64	20.20	[3] 13.34	22.43	
1880–89	20.60	22.56	5.14	15.70	
1890–99	15.51	18.30	19.86	13.64	
1900–09	13.06	19.29	19.26	6.13	
1910–19	13.07	15.60	24.86	20.65	19.69
1920–29	26.05	17.63	18.01	10.34	13.20
1930–39	24.45	36.94	20.95	23.15	19.60
1940–49	14.90	23.16	12.81	10.73	16.84
1950–59	3.60	6.32	6.20	3.27	8.25
1960–69	11.76	6.17	9.99	4.01	2.00
1970–79	23.84	19.50	16.99	8.56	27.92

[1] Calculated by averaging the absolute year-to-year price changes and dividing by the mean price for the decade.
[2] Price data for decades before 1910 not found.
[3] Data for 1876–79, only.

Source: Agricultural Statistics. Various issues.

Table 2 shows the average percent year-to-year variation in U.S. season's average prices by decade since 1870. As with table 1 a "U" pattern is revealed. Prior to the 1930's prices were unstable. For wheat the average percentage change in prices varied from a high of 28 percent in the 1920's to a low of 13 percent in 1900–19. Corn prices also varied greatly but did not have the range wheat prices have had—a low of 15.6 percent and a high of 22.6 percent. The average percent changes in prices of cotton and tobacco are quite erratic prior to 1930 with lows of 5 and 6 percent and the high variation of 24.9 and 20.6 percent.

During the 1930's year-to-year price changes were large—for corn the largest of the entire series, and for wheat the second largest—due to large declines in crop prices during the Depression. Thereafter, in the 1950's and 1960's, the variation in prices for all commodities declines sharply—to between 3 and 8 percent. During the 1970's the variability in prices experienced prior to the Depression reemerges. The year-to-year variability in prices for wheat rises to 23.8 percent which is just slightly above the normal level prior to 1930, but well within the range experienced. The year-to-year changes for corn and cotton prices are consistent with the pre-1930's level, while the variation in tobacco is less. Only for rice is the variation well above the pre-1930's level.

While price variability itself is not new, the data in table 2 show that it has increased for all crops since the 1950's and 1960's, and for rice and to some extent wheat compared to before the Depression. Several causes can be identified. A major factor has been an increase in the average level of world agricultural trade barriers, as well as a change in policy instruments used to achieve protection. The increased role of developing nations and centrally planned nations using state trading in world agricultural markets can transmit variability to world markets when these nations behave in an unpredictable manner, such as the Soviets did in the 1970's, or when they adopt policies which sever the linkage between internal and external prices. The nations of the Pacific Rim, in particular, constitute a large growing market for U.S. commodities. As occurred for other nations, as the Pacific Rim nations have developed they have increased assistance to domestic agricultural producers through higher trade barriers.

Although Western European nations account for a smaller share of world agricultural trade—particularly for wheat—they have also changed their policies. At the outset of this century, European nations primarily used tariffs to protect their agricultural producers (McCalla). Tariffs permit price variations to be transmitted across borders. In recent years, these nations have adopted policies which insulate their domestic markets from world price changes, thereby, magnifying the instability in world prices. Britain is a particularly useful example of such policy changes. Early in the 1900's, Britain was a large wheat importer which followed a free trade policy. During the 1930's Britain adopted import tariffs as did all other countries. In 1973, Britain joined the EC and accepted the EC policy of variable levies which add to world price instability. Other European countries followed a similar path, although at different speeds. Present policies in Western Europe magnify the instability in world prices.

Institutional developments in other exporting countries may have also increased world price variability. The Canadian Wheat Board is a product of the Depression and acts to stabilize producer returns. The Australian Wheat Board is an outgrowth of the Second World War. Stochastic simulation analysis of board marketing suggest that these types of institutions can increase world price variability (P. Paarlberg and Holland).

MACROECONOMICS AND U.S. AGRICULTURE

Another recurring theme in the current literature is that U.S. agriculture is increasingly integrated in the U.S. and global macroeconomy. Except for the middle of this century, U.S. agriculture always has been integrated into the rest of the economy. Describing the late 19th century Buck writes:

> Farmers commonly bought their supplies and implements on credit or mortgaged their crops in advance; and their profits at best were so slight that one bad season might put them thereafter in the power of their creditors . . . Many farmers were heavily mortgaged at rates of interest that ate up the farmers' profits (Buck, p. 20).

Buck [pp. 120–1] notes that farmers asked—demanded—reduction of tariffs on industrial goods, interest rate reductions from 10 to 8 percent, and the free coinage of silver to expand the monetary base [inflation]. These same problems are faced today. The 1984 economic report of the President, for example, discusses the sensitivity of agriculture to changes in interest rates and monetary policy. According to the Washington Post, farmer representatives and labor leaders have exchanged sharp debate in hearings over auto-content legislation and restrictions on steel imports. United States-Chinese agricultural trade has been disrupted by disputes over protection of U.S. textile manufacturers.

The "boom and bust" cycles of the 19th and early 20th centuries were heavily influenced by changes in the money supply. A policy to inflate the economy to benefit agriculture even launched a persistent, but fruitless, Presidential campaign in 1896 by William Jennings Bryan. Agriculture versus protection debates are not a recent phenomenon. Conflicts between farmers seeking export markets and manufacturers seeking import relief are a major theme of U.S. history in the 19th century.

If macroeconomic factors are not new to U.S. agriculture, why is it popular to write that they are? Again the statement that U.S. agriculture is increasingly integrated into the rest of the economy partly reflects an exceptional period for U.S. agriculture used as a basis for comparison, and partly reflects changes in the magnitude of interaction.

Although the growth in U.S. agriculture was heavily financed by Eastern United States and British banks in the 19th century, and farmers in that century relied heavily on purchased inputs, there is evidence that the dependence of agriculture on the rest of the economy has grown. Table 3 shows the share of production costs and the share of interest on farm mortgage debt in U.S. gross farm income by decade since 1910. Both have the familiar "U" shape and both are greater today than before. In the period 1910–19, 3.1 percent of farm income went for interest on farm mortgage debt. By the 1940's the interest share had fallen to 1.0 percent—perhaps a reaction to the use of debt financing by those farmers who survived the Depression. Interest as a share of gross receipts began to rise in the 1960's, and was only slightly greater than the 1910–19 period during the 1970's. The share of farm income going to all production expenses tells a slightly different story. Prior to the Depression inputs purchased accounted for between 48.9 and 58.6 percent of gross farm income. During the 1950's, 1960's, and 1970's, the share of farm income going to production expenses rose to 64.3, 69.4, and 69.0 percent, respectively. One difference between the two sets of figures in table 3 is that after the Second World War, U.S. agriculture increased its reliance on purchased fertilizer, seed, and fuel.

TABLE 3.—SHARES OF INTEREST ON FARM MORTGAGE DEBT AND PRODUCTION EXPENSES IN U.S. GROSS FARM INCOME BY DECADE SINCE 1910

[In percent]

	Share of farm income	
	Interest [1]	Production expenses [2]
1910–19	3.1	48.9
1920–29	4.8	57.7
1930–39	4.6	58.6
1940–49	1.0	50.8
1950–59	1.1	64.3
1960–69	2.3	69.4
1970–79	3.5	69.0

[1] Interest on farm mortgage debt divided by gross farm income.

[2] Total production expenses divided by gross farm income, includes: feed purchased, livestock purchased, seed purchased, fertilizer and lime, repairs, depreciation, hired labor, taxes on farm property, interest on farm mortgage debt, rent to landlords.

Source: Agricultural Statistics. Various issues.

Flexible exchange rates and international asset markets represent another factor which has reemerged in a different form. With the specie-flow system, in principle, international transfers served to expand or to contract the monetary base, thereby, causing internal price adjustments. With the end of the Bretton Woods Agreement in the early 1970's, exchange rate movements also have caused internal prices to adjust, unless sterilized. Schuh argues that the emergence of world financial asset markets in the context of flexible exchange rates is a fundamental change. Whether this is a change can be debated. European and U.S. asset markets were well integrated in the 19th century as extensive foreign (European) financing of U.S. agricultural development shows. Given the importance of Europe to U.S. exports early in this century, the export market and financial asset market may have been just as completely integrated then as now.

A clear fundamental change in the patterns of world trade has occurred as developing and centrally planned countries have increased their importance to world agricultural trade. World financial asset markets have expanded to meet this change. The ability of these nations to finance imports of agricultural products; that is, to increase expenditure relative to income, is a critical development. The pool of loanable funds worldwide expanded rapidly after the oil price rises in 1973 and 1979. The monetarization of these price shocks, especially after 1973, allowed financial assets to flow from developed countries, to oil exporters, who then (through commercial banks) provided credit to developing and centrally planned nations. The rapid growth in demand for U.S. agricultural exports in the late 1970's was partly due to growth in exports to developing and centrally planned countries resulting from these financial transfers. The slowdown in U.S. exports in the early 1980's is also partially a result of these nations' inability to service the debt which had accrued as a result of these transfers. One major difference with the past is that the loans of the late 1970's were made to national governments rather than individuals. As a result, the bank's solvency, and in some cases the world's financial system, is dependent on a single debtor's ability and willingness to repay obligations.

REEMERGENCE OF THE INTERNATIONAL ENVIRONMENT

The central theme of this paper is that the changes in the international environment facing U.S. agriculture are largely a reemergence of old environment with a somewhat greater influence on U.S. agriculture. The question which naturally follows is why did the old environment reappear? Changes in U.S. commodity policies and changes in U.S. macroeconomic policy appear to be strongly linked with the reemergence.

The "U" shaped patterns observed above reflect changes in these factors. The data can be divided into four phases based on U.S. Government policy. The first phase was one of limited U.S. Government involvement in both agriculture and the macroeconomy which ended about 1930. The direct involvement of the Federal Government in agriculture was limited. Federal Land Bank System, established in 1916, provided long-term credit, while Federal Intermediate Credit Banks were established in 1923 (Chandler). The Agricultural Marketing Act of 1929 created the short-lived Federal Farm Board, but it was not until 1933 that large direct U.S. Government involvement became reality for U.S. agriculture. Until the 1930's, U.S. farmers coped with their problems as best they could.

The story of U.S. Government involvement in the macroeconomy prior to the 1930's is similar to that for agriculture. Policies designed to stimulate aggregate demand were years away. Even Roosevelt promised to balance the Federal budget in 1932. The U.S. Government nominally had limited control of monetary policy. However, J.P. Morgan controlled gold reserves rivaling the U.S. Treasury and is reputed to have averted a monetary collapse in 1907 (Cochran). The newly created Federal Reserve System was inexperienced, as subsequent events during the Depression would show.

The period 1930–70 stands in sharp contrast. The response of the Federal Government to the Depression and its aftermath has been well documented—both for agriculture and the general economy (Chandler; D. Paarlberg; and Rasmussen). Price supports for agricultural commodities were set above market clearing levels, marketing orders were established, land was retired from production after the Second World War, and U.S. Government stocks accumulated throughout the 1950's and 1960's. Exports were subsidized or sold to needy countries on concessional terms to offset the loss of competitiveness due to the price supports. Fiscal policy evolved into an era of aggregate demand management, while monetary policy targeted interest rates—all under a system of fixed exchange rates.

Some of the consequences of this policy environment were that price variability in agriculture was limited as prices were supported at U.S. Government determined levels (see table 2). A Government market replaced the export market. Support prices above world market levels reduced import demand and encouraged export supply by our major competitors, thereby, reducing the role of exports (table 1). Public stocks and Federal expenditures on agriculture mounted. In the 1950's and 1960's, export subsidies and credit programs were used to offset the effects of price supports on world markets and to reduce Federal expenditures by reducing public stocks (Grigsby and Jabara). Interest rate targeting and expansionary fiscal policy resulted in inflationary pressures in the early 1950's, late 1960's, and early 1970's, and produced low interest rates which lessened the debt load of U.S. farmers (table 3). These worked in conjunction with agricultural policy to stimulate farm output. An increasingly overvalued fixed exchange rate added an additional implicit tax on exports.

During this period the problem of price variability, a large reliance on trade, and the linkage between U.S. agriculture and the world macroeconomy were masked by a Government regulated agriculture and by aggregate demand management policies. The agricultural imbalances resulting from this policy mixture became apparent and real support prices for wheat, corn, and rice began to be lowered starting about 1950 (figures 2, 3, 4). For cotton the process of lowering real support prices started later and proceeded slower than for the grains. U.S. agricultural policy entered a phase of reducing the Government's role through the 1960's and into the 1970's. Target prices and deficiency payments became the mainstay of U.S. commodity programs in the 1970's. For wheat and feed grains the process of Government withdrawal proceeded quickly, and the role of trade to these commodities and the problem of price variability reemerged (tables 1 and 2). For cotton and tobacco the withdrawal of the U.S. Government's role has been slower and less complete. Consequently, for these crops trade has not recovered its traditional importance and price variability is less of a problem (tables 1 and 2).

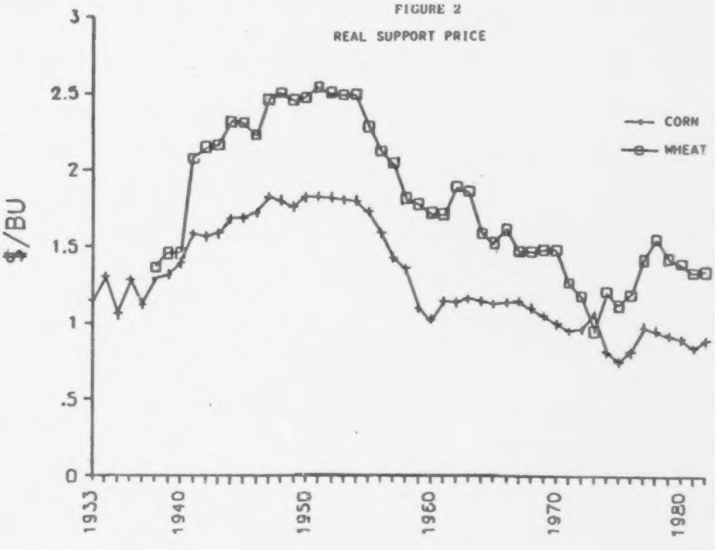
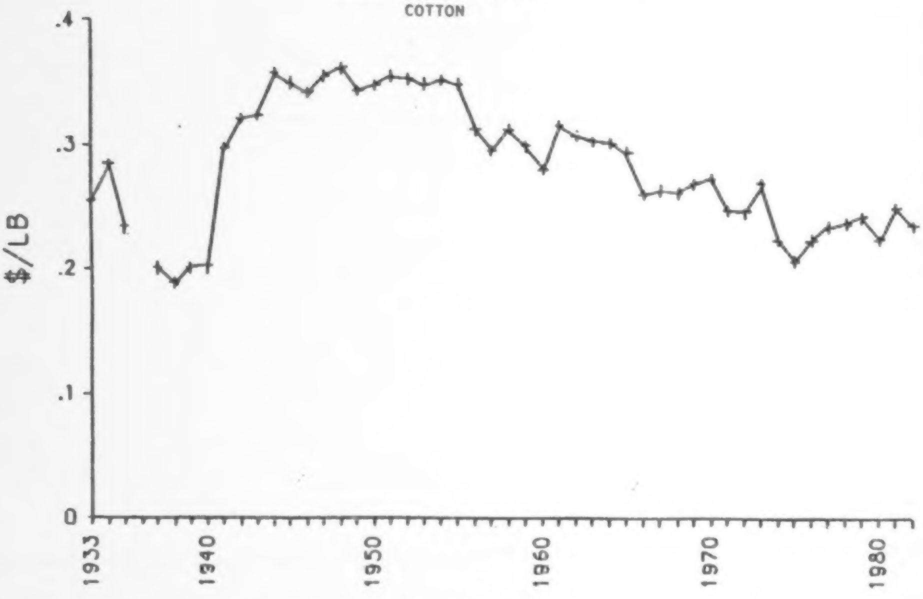


FIGURE 2

REAL SUPPORT PRICE

FIGURE 4
REAL SUPPORT PRICE
COTTON



By the early 1970's, the imbalances from U.S. macroeconomic policy also became evident. Monetary policy became more erratic—first tightened, then loosened (see changes in M2 and M3 in the Economic Report of the President, 1984, p. 291). These changes in money growth, in conjunction with the target price policy, increased the variability in agricultural commodity prices. Fiscal policy seemed less effective as both unemployment and the price level rose simultaneously. Fixed exchange rates were replaced by flexible rates which were sensitive to macroeconomic shocks and added variability to commodity prices. Rapid expansion of the money supply and world liquidity following the oil price increases caused developing nations to finance agricultural imports in international asset markets.

The policy environment appears to be changing again in the early 1980's. In 1979 the Federal Reserve switched from a policy of targeting interest rates to one of targeting the growth of the money supply. Developing nations and centrally planned nations—which had financed much of their growth in agricultural imports in short-term credit markets—have become vulnerable to changes in interest rates due to targeting the growth of the money supply rather than targeting interest rates. Variable interest rates also induced variation in the exchange rate of the now floating U.S. dollar which directly affected U.S. agricultural exports. The early 1980's has seen the rise of the supply-siders who advocated tax cuts to restore incentives for investment thereby stimulating output and employment without inflation, and a deepening public concern about Federal budget expenditures on programs like agricultural commodity programs. Macroeconomic policy is currently in a state of transition.

In agriculture these factors, and a large increase in world production due to good weather, resulted in a decline in U.S. exports and farm prices, and a deterioration in net U.S. farm income. The response of the U.S. Government was to return to previously used policies, such as the Acreage Reduction Program of 1982 and the Payment-in-Kind Program of 1983. These programs hint of a return to a greater Federal role in U.S. agriculture. Thus, U.S. agricultural policy is also in a state of transition as U.S. policymakers attempt to deal with this reemerged environment.

CONCLUSIONS

The changes in U.S. agricultural and macroeconomic policy in the past two decades have allowed the international environment which the United States once faced to reemerge. Exports are again critical to the health of the agricultural sector. Variability in commodity prices, farm income, and land prices due to uncertain export demand has returned. Fluctuating exchange rates and interest rates add to the volatility of prices and input cost. Income growth both at home and overseas is again critical to U.S. agriculture.

Some aspects of the international environment are different after the passage of several intervening decades. The composition of U.S. agricultural exports has changed in favor of ingredients for livestock feed—corn and soybeans. Some of the agents and the institutions in which they operate are different now. Developing countries and centrally planned nations have replaced Western Europe in importance. The centrally planned countries are frequently erratic buyers. Developing countries depend on credit. Even the institutions used by European nations have changed such that they add to price variability. Most of these differences; however, amplify the reemergence of the role of trade and price instability to U.S. agriculture rather than represent changes.

A critical question faced by U.S. policymakers is the evolution of future U.S. agricultural and macroeconomic policy. Will the United States respond to the reemerged international environment by returning to a policy of intervening in an attempt to isolate the agricultural sector from trade, variability, and from other sectors? Will the United States adopt a more limited intervention policy somewhat like that of the first 30 years of this century? What alternative policies might the U.S. adopt to deal with U.S. agriculture in an international context? Each policy strategy has its benefits and its costs. The United States has experienced both a limited internvention policy and a strong intervention policy in the past. When analyzing future policy strategies, the lessons learned by earlier generations of policymakers and farmers—both positive and negative—can provide insights to possible directions.

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THE EVOLUTION OF AMERICAN AGRICULTURE FROM A DOMESTIC TO AN INTERNATIONAL INDUSTRY: WITH POLICY IMPLICATIONS

(By Leo V. Mayer)*

INTRODUCTION

U.S. agriculture has passed through several stages in achieving its present high level of productivity. One stage was a long period of land expansion. After the land base stabilized around 1900, agriculture entered a second stage with increasing use of nonland inputs. A third stage was reached after 1935, when overall resource use stabilized but shifts continued in input composition. The fourth period saw a sudden growth in world demand that resulted in massive export growth for U.S. farmers. This latter stage, where exports grew at unsustainable rates, was perhaps the shortest, and partly because of the erratic interventions of the Federal Government, the most volatile [2].

In each of the four stages, Federal policies were adjusted in an effort to improve conditions in agriculture. In hindsight, it appears that some of the policies applied were more appropriate to a previous stage of development. It can be argued, for example, that drawing families back into farming after World War II was a retrogressive policy. Similarly, keeping price supports at high levels after World War II was costly in terms of later economic and social adjustment. These examples illustrate that a major challenge for policymakers is to formulate for future conditions rather than depend on past policies and conditions.

FARM POLICY GOALS AND PURPOSES

Since 1933, Federal farm policies have been shaped to meet many different goals. One theme, especially evident during the Dust Bowl days when Federal farm programs began, was that weather related variability in crop production created an unacceptable amount of risk for farm families. This was a major justification for the original Federal programs of price support and disaster relief.

A second theme that developed during World War II was that farmers required protection against sudden shifts in demand, like occurred after the end of World War I. This theme was implemented in the Steagall amendment that extended 90 percent of parity price supports for basic commodities for 2 years beyond the official end of World War II.

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The period after World War II brought forth still a different theme. New technology in the form of new and larger machines provided farmers who could afford them with an opportunity to expand farm size. With the land bases relatively fixed, farm expansion meant taking over land from other farms. As the pace of farm consolidation quickened after the war, and as low farm incomes intensified the pressure for many farm operators to quit, small town businessmen and national politicians sensed the upcoming loss if farm numbers dropped precipitiously. Protection of the family farm became a major theme of proposed farm legislation. An early example was the Brannan plan which Congress voted down in 1949.

In the 1950's, an additional goal, soil conservation, was highlighted in support of farm programs. This goal supported the removal of low quality cropland from production as a means of lowering output. It was the foundation under the Soil Bank Program. Unfortunately, when the Soil Bank contracts expired, most of the submarginal acreage came back into intensive crop production. This was particularly true when exports raised prices and increased crop profitability in the 1970's.

Throughout the post-World War II period, an oft repeated view was that farm families needed more economic assistance. Despite this, however, the amount provided by the Federal Government was inadequate to prevent the farm population and number of farms from declining [8]. Congress, and successive administrations, debated the merits of more economic aid for farmers, but the final shape of farm legislation generally left a substantial amount of economic risk with the farm operator. For many farmers, the risks proved too great and the result was a shift to part-time farming and an off-farm job or complete termination of the farming operation.

This policy approach generally resulted in declining real prices for farm commodities throughout the 1950's and 1960's. In turn, this meant that much of the gains from technological improvements went to consumers in the form of lower cost food. One alternative would have been for the Government to hold farm prices up as technical advances lowered production costs, thus allowing farmers to retain the gains. One argument against this was that most scientific advances came from tax supported institutions. A second was the nature of the economic system in agriculture would have led the gains to be capitalized into land values, thus raising land costs, production costs, and food costs for the next generation.

While economic logic favored holding down farm production costs and food costs, some farm groups made strong arguments in favor of higher price supports. Such an action, it could be argued, would have slowed the migration from farming and restrained the influx of larger machines into agriculture. It would also have meant that more income claimants would have remained in farming. The added costs for these claimants would have had to be paid, either by the Federal Government through farm programs or by higher prices for food in the marketplace.

EXPORT DEPENDENCE AND FARM POLICY

When the era of export explosion arrived in the early 1970's, new considerations became important in setting farm policy. Increasingly, policy had to take into account the growing importance of international markets for farm commodities, and the effect those policies had on the incentives of farmers to expand production in other countries. To compete in international markets, American farm commodity prices had to be competitive with product prices of other countries. To prevent loan rates from becoming an umbrella for producers in other countries, support prices had to be set at market clearing levels.

This requirement placed policymakers in a dilemma, a dilemma not unlike that which legislators faced with the excess capacity and resource adjustment problems three decades ago. Then, higher support prices might have slowed structural change but these same higher prices tended to worsen the excess capacity problem. Today, higher price supports might help relieve the severe income and debt conditions in parts of the farm sector but those same higher support prices tend to make the United States less competitive in international markets. Such a lack of competitiveness tends to be disastrous in terms of maintaining and expanding export markets for American farm products.

Some evidence of the impact of overly high price supports already exists. In the late 1960's and throughout the 1970's, American support prices were at competitive levels and exports expanded. But the 1981 Farm Act passed by Congress sharply increased the level of price guarantees for major commodities. As world production of commodities exceeded market requirements after 1981, world commodity prices declined, coming to rest on U.S. price supports. U.S. exporters found themselves unable to purchase U.S. commodities at prices competitive with supplies from other countries. This reduced U.S. competitiveness in world markets. Farm exports, which hit a high of almost $44 billion in 1981, declined in both 1982 and 1983 and would have declined in 1984 but for drought that reduced 1983 crops and raised prices on the smaller amounts exported in 1984.

A second effect of the higher price supports in the 1981 Farm Act was the encouragement of expanded production of crops in competitor countries. As U.S. support prices set a floor under world market prices, producers in other countries found they could depend on those prices as minimums for their production. With these expectations, and with a strong U.S. dollar, producers in other countries had favorable incentives to expand production. (The value of the dollar is important because nearly all grain is exchanged in world trade for U.S. dollars. Marketing boards in competitor countries take those dollars and exchange them for their own currencies, receiving larger amounts of their own currencies as the dollar strengthens. The marking boards can then pay their farmers a higher price for their commodities which gives their producers an incentive to expand production.) Wheat is a particular example. Over the past few years, production in several competing countries has expanded by sizable amounts (table 1).

TABLE 1.—WHEAT AREA HARVESTED IN UNITED STATES AND COMPETITOR COUNTRIES, 1970–83

[In millions of hectares]

Year	United States	Total competitors	EC	Canada	Australia	Argentina
1970	17.6	26.1	10.9	5.1	6.4	3.7
1975	28.1	34.8	11.4	9.5	8.6	5.3
1980	28.7	40.0	12.6	11.1	11.3	5.0
1981	32.8	42.8	12.6	12.4	11.9	5.9
1982	31.9	44.4	13.0	12.6	11.5	7.3
1983	24.7	46.2	13.1	13.7	12.6	6.8

Source: U.S. Department of Agriculture. Foreign Agricultural Service. Foreign Agriculture Circular (Grains). FG–17–79. Oct. 16, 1979, and FG–37–83, Dec. 14, 1983.

With larger wheat plantings, other countries also export more wheat. This became increasingly true after 1981 when higher support rates made the United States less competitive. The higher supports followed the U.S. imposition of an embargo on grain exports to the Soviet Union on January 4, 1980, and was probably the most disruptive effect of that embargo. The combination brought about a sharp drop in wheat exports from the United States and larger exports from other wheat exporting countries (table 2).

Wheat exports from other countries had also expanded rapidly in the early 1970's, rising from 36 million tons in the 1970 marketing year to nearly 51 million tons in the 1975 marketing year. For the next 5 years, their exports of wheat remained relatively stable. But after 1981, their exports rose again, with the increase about equal to the decrease in U.S. wheat exports.

TABLE 2.—EXPORTS OF WHEAT FROM THE UNITED STATES AND COMPETITOR COUNTRIES, 1970–71 TO 1983–84

[In millions of metric tons]

Year	United States	Total competitors	EC	Canada	Australia	Argentina
1970–71	19.8	36.0	14.2	11.8	9.1	0.9
1975–76	31.9	50.9	26.7	12.3	8.7	3.2
1980–81	41.2	47.5	20.3	16.3	7.1	3.8
1981–82	48.2	49.6	15.5	18.4	12.1	3.6
1982–83	41.1	54.0	15.5	21.4	7.3	9.8
1983–84	38.1	58.5	16.0	21.5	13.0	8.0

Source: Id. table 8.

The shifting fortunes of U.S. wheat producers after 1981 recalled earlier days when wheat exports had lagged. In the 1950's, supplies of wheat exceeded available markets at the prices established by support programs. In turn, commercial exports of wheat fell and only the assistance of Government programs like Public Law 480 kept wheat sales on the increase. After support prices were lowered in the early 1960's, commercial exports of wheat began to pick up (table 3). This trend continued until world demand absorbed all available supplies after 1972.

It is also evident from the data in table 3 that the export experience after 1981 paralleled that of the 1950's. As market prices dropped to near or below support prices, exports of U.S. wheat declined. World wheat trade remained on a plateau with other exporting countries replacing U.S. exports. The U.S. market share dropped sharply, from nearly 48 percent in the 1981-82 marketing year to under 38 percent in the 1983-84 marketing year. While this situation was particularly acute for wheat, it illustrated a fundamental principle: Price supports at too high a level can have a devastating effect on commodities where export markets are an important part of total utilization.

FARM POLICY FOR EXPORT EXPANSION

The past few years have reproven that certain economic relationships do not change where agriculture is concerned. Primarily, the most important of these regards the role of commodity prices. Flexibility in commodity prices is essential if production and allocation of commodities are to respond to changing market conditions. This has become even more true in the marketing of farm commodities as overseas markets have taken on a larger importance in terms of total sales.

TABLE 3.—RATIO OF LOAN RATES TO PRICES RECEIVED FOR WHEAT, WHEAT EXPORTS, AND U.S. MARKET SHARE, 1950-83

[Wheat exports in millions of bushels]

Years	Ratio of loan rates to market prices (percent)	U.S. wheat exports			U.S. market share (percent)	
		Total	Gov't. ass't.	Net comm.	Total	Net comm.
1950-54	104.4	335	29	306	32.9	29.9
1955-59	103.4	434	311	123	35.7	11.0
1960-64	98.3	684	494	190	40.5	12.3
1965-69	92.0	707	345	362	36.4	18.8
1970-74	64.7	944	155	789	41.8	34.5
1975-79	71.8	1,163	140	1,023	43.9	38.5
1980-81	76.7	1,510	115	1,395	43.8	40.5
1981-82	87.7	1,769	120	1,649	47.6	44.3
1982-83	100.0	1,508	120	1,388	41.9	38.5
1983-84	102.5	1,398	120	1,278	37.8	34.6

Source: U.S. Department of Agriculture. Agricultural Statistics. 1972 and 1981; Foreign Agriculture Circulars. (Grains). FG-17-79 and FG-37-83. Oct. 16, 1979, and Dec. 14, 1983.

The level of commodity prices has been a prime focus of all major farm legislation since the Farm Board attempted to stabilize farm marketings in 1929. That failure was a forerunner to later experiences with price stabilization. The major difference has been that the Farm Board had far more limited funding than the Commodity Credit Corporation that followed it. Given adequate funding, a nation can follow almost any farm policy. The actual policies followed in the United States in the post-World War II era have often tested that assertion.

There have been other limitations on farm policy. One has been the rate of social change acceptable in rural areas of the Nation. This limitation was tested often after the end of World War II as new technology and machines resulted in the consolidation of farms. More recently, structural change has become a side issue which still attracts attention but does not excite legislative action. Family farm interest groups have recently had to be satisfied with a legislative directive for a study of some type, a sure indication of waning influence.

With the importance of market competitiveness reproven since 1980, the stage is now set for turning farm policies away from high price supports and Government-dictated acreage reductions and storage programs. One direction policies could go would be toward more market-dictated production and marketing decisions like in the 1970's. With the Federal Government showing clear signs that the negative impact of trade embargoes is better understood, heavier dependence on the market may now be more feasible.

This does not necessarily mean an end to all income support programs for farm families. Increased market orientation could be accomplished by again disengaging the income support function from the pricing function, a step that was taken in the early 1960's but was largely reversed in the 1981 farm bill. How much of that regression was due to the Soviet grain embargo imposed on January 4, 1980, is unknown but certainly the embargo did not reassure Congress and the farm public of the administration's ability to handle greater flexibility in farm programs.

Future decisions associated with farm income support programs, the issue of how to distribute Federal support funds, who should get the benefits and how much each farm should be eligible to receive, are questions that must receive thorough attention. As Assistant Secretary of Agriculture William G. Lesher recently pointed out in a speech before the 1984 Annual Farm Bureau Convention, "Agriculture and farm life have changed dramatically in the last few decades. And, the time is approaching when the public will require a comprehensive review of the degree and distribution of income protection provided to the farm sector, and the legitimacy or need for achieving the stated objectives."

The data on current farm family incomes supports Secretary Lesher's assertion. There has been a vast improvement in farm family incomes in the past two decades. While some farming operations still face severe income problems, a majority do not. Continuing Federal payments to all farms is going to strain the budget for farm programs and eventually endanger Federal assistance for those farmers for which Federal payments are critical.

There are other important issues to be determined for future farm policy. Competitiveness in world markets is a prerequisite to export expansion but it does not assure larger markets. Building overseas markets is a talent that requires a knowledge of products, markets, and marketing techniques. Such a knowledge base must be established in university teaching and research programs as well as through practical experience. Currently, U.S. agriculture is far better supplied with information on production techniques than with information on foreign markets, marketing skills, and marketing essentials like export financing methods, health and sanitary regulations in importing countries, and tastes and preferences of their consumers.

In a broad sense, farm policies need to be refocused to achieve a better balance between production and marketing. The United States has had a production-oriented farm policy almost from its beginning—an orientation that has been very advantageous to the Nation in the form of low cost food supplies. The time has arrived, however, to phase in a greater marketing-orientation in our farm policies to ensure that markets expand along with production. The exact steps necessary to accomplish this are not entirely obvious but it must begin with a greater focus on marketing, in our universities, research centers, and Government agencies.

One small phase of the imbalance between production and marketing in our current farm programs is the amount of funding that is available to encourage production through support prices as opposed to expanding overseas markets. The Commodity Credit Corporation is currently authorized $25 billion of funds for supporting prices and reducing or storing crop production when necessary. Total funding for export credit programs averages a small proportion of this, usually less than 20 percent. As Assistant Secretary Lesher recently pointed out to the Farm Bureau convention, "While the U.S. attempts to reduce production through acreage reduction programs, some of our foreign competitors continue to expand production while exporting surplus commodities and processed farm products using massive subsidies." One can fairly ask: If other countries are using their budgets for such different purposes, should we not question our own budget expenditure patterns?

Actually, we should examine rather carefully the whole concept of reducing acreages to hold down crop production. If it is true as Lesher suggested in his Farm Bureau speech that acreage reduction programs are largely ineffective because (a) producers first take their worst land out of production, (b) larger farms are precluded from participation by the payment limitation, (c) efficient producers outside the program expand production, and (d) any kind of tightening up of the program (such as cross compliance, restrictions on summer fallow, or mandatory controls on haying and grazing), will be blocked by the Congress, then one must ask if these programs are even feasible. In a prior time when inelastic domestic markets were the primary sources of demand for U.S. farm products, cutting back output may have made sense. But with more elastic international markets now making up such a large part of total demand, the feasibility and usefulness of acreage reduction programs must be questioned.

This further underscores the importance of increasing our focus on marketing, especially overseas marketing. But it should be stressed that this will add further complexities to the process of developing farm legislation. Over the last few decades, the farm policy environment has become more and more complex. In the early years, the tradeoffs were primarily between different sectors of the total economy—more for agriculture meant less for other sectors. Today, the tradeoffs are within agriculture—higher price supports means more farm income but less foreign sales, and more excess production capacity and more Federal expenditures to hold down farm output or store the excess.

Farm policy has become complex for other reasons as well. Food is now an international issue, made so by the shortages of the early 1970's and the continuing growth of population in most of the developing world. As an international issue, farm policy has taken on characteristics associated with foreign policy, international economic policy, and even national security. These additional elements increase the number of interested participants in farm policy deliberations and food program administration and make the dialog more complicated. Perhaps the most succinct description of the whole farm and food policy agenda is that U.S. foreign policy has always been complex, U.S. farm policy is slowly joining it.

But that reality poses special challenges for farm policymakers. Their framework for formulating farm legislation must broaden to a more international orientation. While the constitutency for farm programs remains domestic, some major economic factors affecting those programs are international. The framework for farm programs must become global if the agricultural sector is to continue expansion and growth.

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FUTURE POLICY DIRECTIONS FOR AMERICAN AGRICULTURE

(By J.B. Penn and William Motes, American Farmland Trust)

I. INTRODUCTION

Governments throughout the world intervene in their agricultural sectors to achieve important social goals. This has been the case in the United States, where the farm sector has been heavily regulated for over 50 years with programs involving substantial public expenditures. That the farm sector has been able to maintain these programs and public expenditures is especially remarkable in view of the dramatic technological and economic changes and the continual shrinking of the farm population. The farm sector generally and certain commodity subsectors particularly have maintained effective political power proportionally far greater than their numerical strengths.

Ironically, this very success is capturing public expenditures at a time of serious fiscal concern and when the role of the Federal Government in all aspects of economic life is being closely scrutinized is prompting critical public appraisal of the continued need for farm programs. Congressional deliberations on a new farm bill in 1985 could produce fundamental changes in the programs, a result of reduced public willingness to continue spending large sums to operate them.

The farm programs were begun as a response to economic conditions during the Great Depression. At that time, fully one-fourth of the Nation's population resided on almost 7 million farms and their economic status was particularly distressing. The incomes of farm people averaged considerably less than one-half of income of the rest of the population. The efforts to raise their incomes were a major part of the Roosevelt New Deal programs.

In the ensuing 50 years, farming has changed tremendously, more in that relatively short time span than in the previous 2,000 years. It has undergone both mechanization and science "revolutions"—the substitution of mechanical power for animal power, and widespread adoption of plant and animal advancements, and chemical fertilizer and pesticide formulations—and a transformation in markets to become a major world supplier of food products. The migration of people from agriculture was so large that the farm population has fallen to 6 million today, 2.4 percent of the total, and the farms have been consolidated into 2.4 million units. Moreover, the once wide disparity between farm and nonfarm incomes no longer exists. In short, farming has been transformed from a rural way of life, as it was before World War II, into a high-technology, sophisticated business. Much of the uniqueness it once had now is gone, though not forgotten.

The fundamental changes in farming over 50 years in combination with recent developments are prompting increasing discussion of whether there is sufficient justification for a continued large role for government in agricultural production. Beyond that, however, is a broad consensus that the farm programs are not working well and should be modified. This unusual and more fundamental examination of the role and purpose of the farm programs at this time stems from a combination of forces and events including:

The evolution of the farm sector itself, especially the growing concentration of production among fewer and fewer large farms.

The recent tremendous increase in cost of the programs, while concern mounts over the expanding Federal budget deficit—in fiscal year 1983 the more than $28 billion cost of the programs was the equivalent of 16 percent of the deficit.

Serious fractures in the political coalitions that favored the programs. Recent program changes also have generated considerable ill will and disharmony. The dairy program enacted in 1983, for example, pitted various agricultural groups against one another for the first time in recent memory. Beyond that, the dairy program and the massive PIK Program—both paying farmers to not produce—have eroded the nonfarm good will that the farm sector has long enjoyed. Paying farmers to not produce always rankles the public and especially when huge payments are allowed to go to a few very large farming operations. Also, the difficult issue with serious moral overtones of a rich country paying farmers to not produce when there remains widespread hunger in many parts of the world is never far from the surface of such discussions.

The PIK Program which idled 16 percent of the cropland significantly affected agribusiness and livestock groups, and has served to bring them into the farm policy debate.

The always present questions relating to the use and conservation of land and water resources and impacts of agriculture on the environment have assumed a greater urgency.

Growing dissatisfaction with program administration—for example, there have been six separate wheat programs announced in the last two seasons. The economic uncertainty farmers face actually is heightened by Government action rather than reduced as is the intent of the programs. The Congress is partly to blame, enacting a 4-year farm bill, then proceeding to modify it every year, often several times.

Even beyond these factors is the continuing belief by many that farmers and the country would be better served by a much-reduced Government involvement and a far greater reliance on market forces. This view has become much more prevalent with the heavy dependence on foreign markets and growing evidence that the programs are interfering with the competitiveness of some products in those markets.

It is against this general backdrop that the debate on new legislation is beginning and against which the Congress will attempt to fashion legislation replacing the expiring Agriculture and Food Act of 1981.

II. RATIONALE AND OBJECTIVES FOR POLICY IN THE 1980'S

If farm programs are to continue to receive the support needed to be passed into law, they not only must cost less than current policy and work more effectively to adjust resources to changing world and domestic markets, they must shed a part of the rationale of the past that no longer applies. While income support for poor farmers may continue to be a goal, income support for all farmers can no longer be a primary policy objective. The economic justification for such a purpose is unlikely to compel support, and the cost of the income support program is increasingly believed to be excessively expensive.

A modern farm policy should address the primary problems that face the industry today: (1) ameliorating the domestic impacts of world export market instability and helping adjust resources to market needs, (2) maintaining competitiveness in world markets, and (3) protecting our soil and water resources.

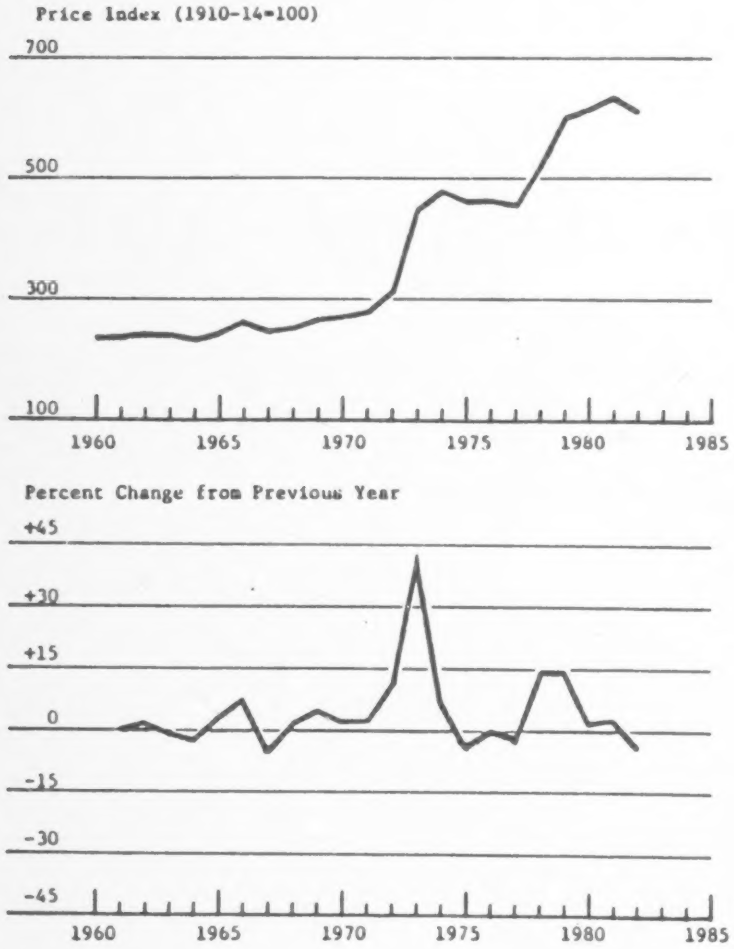
ECONOMIC STABILITY

Since the United States began to market large shares of production in world markets during the 1970's, domestic prices and incomes have become increasingly unstable. Most of the price and income shocks have come from that source.

The world market has a peculiar nature all its own. While a highly efficient world trading system has been developed, there is only a collection of national markets rather than a united, well-defined overall supply, demand, and price structure for the world. The world trading environment is clearly defined, but the price impacts of world supply and demand are extremely ambiguous. While world production and consumption are large and generally ordered by production and income, the world market is frequently disorderly as nations use it to dispose of surpluses or to complement domestic production shortfalls. Prices rise quickly to extreme levels when demand is strong and supplies tight, and fall below cost of production when demand is weak and supplies abundant.

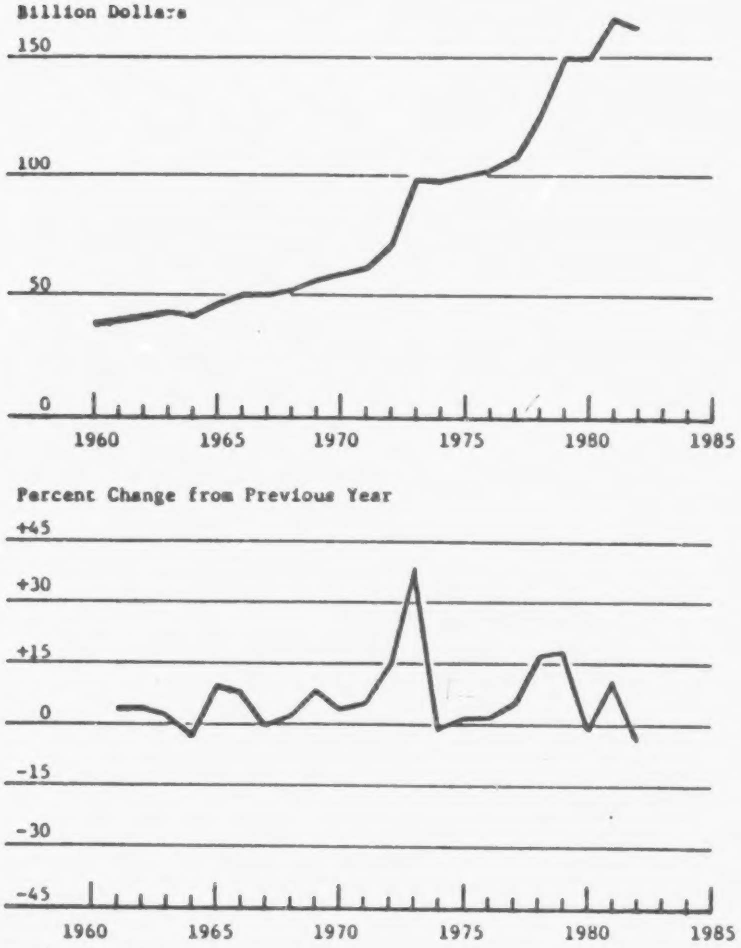
The United States decided to depend increasingly on world markets in the early 1970's, a trend that has strong support among farmers. Nevertheless, the instability caused by volatile world markets has increased sharply over the past decade. (Charts 1 and 2.)

CHART 1.—INDEX OF PRICES RECEIVED BY FARMERS



Source: USDA.

CHART 2.—GROSS FARM INCOME



Source: USDA.

World market instability has created a number of problems in recent years, even though many of its impacts have been masked by the income improvement goal of farm programs. Uncertainty makes good economic decisions far more difficult, so that farmers are less able to allocate resources efficiently. It contributes heavily to future problems and tends to distort both short term and longer term farm developments.

It is likely that many of the problems farmers face today—surplus production, low incomes, and inadequate cash flow—are largely a result of poor decisions made on the basis of overly optimistic views of farm prospects in the mid- and late-1970's. Many borrowed heavily to expand their operations and purchase land, contributing to rapidly rising debt and asset values and increased production. When the optimistic export picture was marred by economic stagnation in the 1980's, farm incomes and asset values fell as production capacity exceeded demand, leaving many farmers in a difficult cash flow squeeze. The result has been loan delinquencies and farm foreclosures. A recent survey by the American Bankers Association indicated that payments on nearly 4 percent of farm loan volume were delinquent in 1982 and 1983, and that over 2 percent of farmers went out of business in each of these years. In the year preceding June 1982, 0.75 percent of farmers went bankrupt; 1.1 percent went bankrupt in the following year.[1]

Not only farmers are hurt by instability in agriculture. When cash flow problems force farmers to become delinquent on their loans or to go bankrupt, agricultural banks suffer losses. Losses of agricultural banks have increased significantly in recent years as farm financial conditions have worsened (chart 3). Increases in the loan loss ratio of agricultural banks have been much more pronounced than loss rates of other small banks. Fortunately, these losses are still fairly small and have not resulted in significant bank failures, as occurred during the 1920's. This is in part because many troubled loans have been refinanced by the Farmers Home Administration [FmHA], which has borne a substantial increase in its exposure as a result, its total lending more than doubling between 1979 and 1983.

Farm lenders face substantial risks due to the present financial situation. Fifty-seven percent of FmHA accounts and over 70 percent of its loan portfolio (in value terms) were delinquent last January, up significantly from a few years ago. Thirty-one percent of the total debt of the farm sector is held by operators who are heavily debt leveraged, with debt-to-asset ratios of over 70 percent.[2] Another 32 percent of the debt is held by operators with debt-to-asset ratios of 40 to 70 percent. Given the present high interest rates and low returns to farming, such highly leveraged operators are likely earning negative returns on this debt. Thus, as much as 63 percent of the farm debt, $135 billion, may be at risk due to the present financial difficulties in agriculture. Not only farmers but the entire banking system is subject to this risk.

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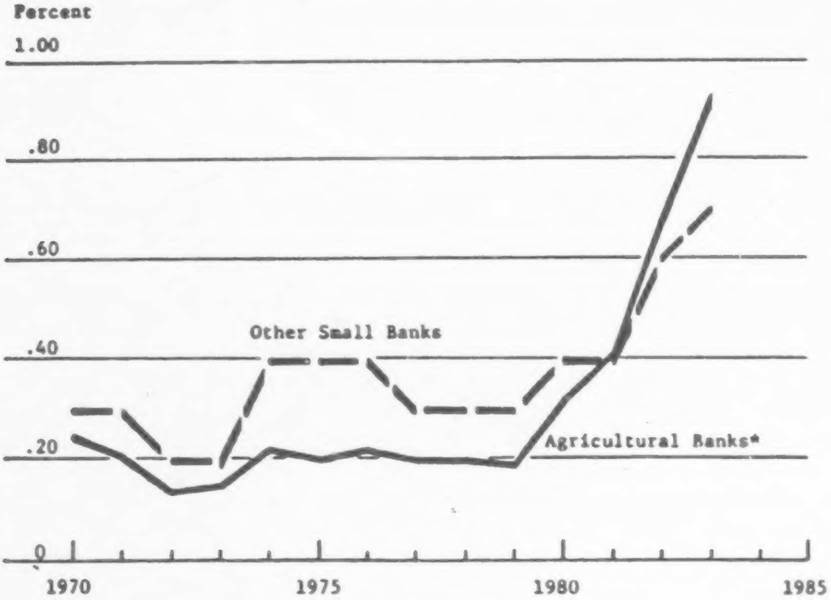
[1] "Agricultural Finance Outlook and Situation," AFO-24, Economic Research Service, USDA, December 1983.

[2] Emanuel Melichar, "A Financial Perspective on Agriculture," Federal Reserve Bulletin, January 1984.

CHART 3.—LOAN LOSS RATES OF AGRICULTURAL AND OTHER SMALL BANKS



* Agricultural banks are banks with less than $500 million in assets for which farm loans are more than 25 percent of total loans.

Source: Emaneul Melichar, "Delinquent Farm Loans at Insured Commercial Banks, Delinquent Loans at Rural Banks, and Loan-Loss, Profit, and Capital Ratios at Agricultural Banks." data presented to the National Agricultural Credit Committee, Washington, D.C., March 19, 1984.

Instability hurts other elements of the food and agricultural system as well. As we have already seen, the decline in farm sales in recent years has severely hurt suppliers of farm inputs, leading to layoffs of workers and closing of equipment dealerships. The example of PIK demonstrates how abrupt adjustments in the farm sector can create significant problems for input suppliers, livestock producers, taxpayers, and consumers throughout the world—particularly those in the poorest food importing countries.

Instability is not unique to agriculture. There are several reasons, however, why instability in the food and agricultural system should be of particular concern to policymakers. For one, agriculture is inherently more unstable than most other industries. Agricultural production cannot be as tightly controlled as production in other industries, dependent as it is upon the uncertainties of the weather. The supply and demand of agricultural products are very inelastic in the short run, so that small changes in supply or demand lead to greatly amplified price and income variations. The U.S. position as residual supplier in world markets adds instability in the quantity dimension as well. The result is that by any measure of stability, whether price, quantity, or some measure of revenues, food and agriculture is more volatile than other comparable industries.

This greater instability in food and agriculture is of singular importance because food and agriculture are so important. Throughout the world, the provision of a stable and affordable supply of food is a primary goal of governments seeking to avoid political upheaval. Even in affluent countries, rapdily rising food prices are a recipe for political discord. This contributed to adoption of export controls by the United States during the rapid food price inflation of the mid-1970's. In the United States, rapid farm income declines also are unacceptable, as evidenced last year by use of the largest paid acreage diversion program in history.

It seems clear that such large scale ad hoc intervention and abrupt policy shifts as witnessed in the last decade have only added to the unpredictability of agriculture, further disrupting the ability of farmers and others in the food system to make good decisions. This leads some to argue that the Government should stay out of agriculture, allowing adjustments to occur solely in response to market conditions without the unpredictable effects of political decisions. While there is merit to this argument, it ignores the political reality that intervention is inevitable when the costs of instability become unacceptable. The adoption of the PIK Program by the Reagan administration, in spite of its strong opposition to Government intervention in the market, is ample evidence of this fact.

As a practical matter then, the question is: How should policies be designed to minimize the costs of instability to farmers and the food system, consumers, and taxpayers, averting the need for abrupt and disruptive Government actions, such as export embargoes and PIK programs? Meeting this objective requires policies which consistently act to dampen the instability which normally occurs, adequately anticipate problems before they become major, and are sufficiently flexible to allow Government to adjust its response to the severity of the situation.

COMPETITIVENESS

It is not enough to design policies which help ensure stability in agriculture. Such policies also must not impede the ability of U.S. agriculture to compete in the world market over the long term.

In the past, Government policies at times have worked to reduce competitiveness. High price supports and an overvalued currency restrained the potential of U.S. agriculture for many years prior to the 1970's. While price supports for most major commodities have since been reduced, several embargoes have eroded our reputation as a reliable supplier, giving many of our competitors the opportunity to displace our exports to some important markets. Presently, monetary and fiscal policies are contributing to the strong value of the dollar, making our products more expensive overseas.

In addition, many of our trading partners and competitors pursue protectionist policies which act to limit access to their markets for U.S. exports and expand the volume of exports from other countries. High price supports and import barriers in Japan and the European Economic Community are a source of continuing frustration for American agricultural exporters.

At the very least, U.S. agricultural policies should be designed with a view toward not hampering the competitiveness of American agriculture. Considering the difficulties raised by the policies of other governments, it is appropriate for our own Government to take reasonable steps to promote fair competition.

SUSTAINABILITY

Another critical goal of agricultural policy should be to ensure the long-term sustainability of the agricultural resource base. It will do little good to develop foreign markets if we cannot sustain the production system over the long run. Resource problems, most notably soil erosion and ground water depletion, threaten our ability to continue expanding production over the long term. Policies should effectively address these problems, before unacceptable and irreversible losses are incurred.

There are many reasons why the private farmer alone does not adequately address agricultural resource problems, particularly soil erosion. For one, risk and cash flow problems caused by instability make it difficult for many farmers to take a long-term approach to farming, because they must be so concerned with survival and profitability in the short run. Instability itself, coupled with policies which encourage farmers to plant fence to fence whenever there is no acreage reduction program, make it less likely that a farmer will apply needed conservation measures to highly erodible land for an extended period.

Second, the perceptions that farmers have about erosion on their land sometimes do not reflect an adequate appreciation of the extent of the problem. Much of the sheet and rill erosion which occurs leaves little physical evidence, and can go unnoticed. In a recent survey by the American Farmland Trust of 678 farmers in six sites around the country, chosen as having erosion rates over twice the tolerance level, 21 percent of farmers owning land and 25 percent of farmers renting land said that erosion on their land was not a problem.[3] Observations of the Soil Conservation Service [SCS] district conservationists indicated that the extent of erosion problems was much greater than most of these farmers realized.

Even though many farmers are aware of erosion, they may not take steps to control it unless they perceive reduced crop yields. The effect of erosion on crop yields is complex. Determining impacts for any individual farmers is problematic. It may be that soil loss affects yields little until it reaches a critical point, beyond which losses are significant. If this is the case, recognition of a problem may occur only after the problem is severe.

Thus, many farmers may act as though soil erosion is not a cost of their operations, since many of the costs may be borne by future farmers and consumers, rather than the present farm operator. While future costs theoretically will be realized in reduced land values, this is of little concern to a tenant operator. Even land owners may not recognize an effect upon the value of their land because of the strong dependence of land values on factors other than soil condition, including inflation and interest rates, tax policies, and demand for land for nonagricultural uses.

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[3] Norman A. Berg and Robert J. Gray, "Soil Conservation: 'The Search for Solutions'," Journal of Soil & Water Conservation, Vol. 39, No. 1, January-February 1984.

Erosion also imposes costs today on people other than the farmer whose soil is eroding. Runoff from farm soils pollute water downstream. In California, for example, water runoff from the agricultural areas of the southern central valley creates water quality problems in the delta region of the San Francisco Bay. This contributed to proposals for the controversial (and now defunct) multibillion-dollar Peripheral Canal, which would have provided fresh water from the north to flush the southern delta. Sediments from soil erosion add to costs of managing waterways. The Army Corps of Engineers estimates that several billion dollars are spent annually to dredge soil deposited in the Mississippi Delta, most eroded from farmland.[4] Adding to this the costs of additional filtration required to purify water for consumption, the external costs of soil erosion become much more significant. A study by the Conservation Foundation estimates the off-farm costs imposed by soil erosion from cropland in the range of $2 to $6 billion per year.[5]

It seems clear that a greater emphasis on agricultural resource conservation in national policy is needed. Present Government efforts are succeeding in reducing only a small fraction of the problem. Much of those efforts are focused on lands where erosion is not a serious concern. Moreover, past conservation efforts have been pursued as a separate goal apart from the basic commodity programs, limiting their scope and effectiveness. For example, the Soil and Water Resource Conservation Act delcares a policy goal of resource sustainability, but this specific purpose is limited to conservation programs, rather than to all USDA programs or Government programs in general. Similarly, the Agriculture and Food Act of 1981 declares it is national policy "to promote soil and water conservation, improve the quality of the Nation's waters, and preserve and protect natural resources," but would achieve this "through the use of effective conservation and pollution abatement programs." The effect appears to be to leave conservation concerns to specific programs, while managing other programs independently of their effect on resource problems.

Such an approach is ineffective. When price support policies encourage farmers to plow up fragile land, resource conservation goals are seriously undermined. When acreage diversion programs are adopted without adequate attention to conservation, the Government wastes valuable opportunities to control erosion. USDA estimates that average soil loss on land taken out of production in the hastily implemented 1983 PIK Program was reduced by 20 percent, from 7.4 to 5.8 tons per acre per year.[6] While this is a significant conservation benefit, it is much less than the potential. According to USDA, over 40 percent of the land idled by PIK had inadequate protection from erosion. Soil loss on program acreage was still greater than that considered tolerable by SCS and more than twice SCS predictions of a year ago. "Soil loss should have been down to around 2 tons per acre if they had had good cover on the fields." [7]

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[4] Congressman James Jeffords, AFT Press Conference, April 5, 1984.

[5] Pierre Crosson, "New Perspectives on Soil Conservation Policy," Journal of Soil & Water Conservation, July-August 1984.

[6] "Conservation Benefits of 1983 PIK and Acreage Reduction Programs—A Preliminary Report," USDA.

Effective solution of agricultural resource problems requires their consideration in the context of overall production and farm policies. Resolving the major resource problems requires a commitment to conservation reflected in all farm policies, and not merely the focus of minor programs separate from the mainstream of farm policy.

III. Policy Options

Since the early 1970's, agricultural policies largely have encouraged production for rapidly growing world markets. But, as world market growth has slowed in the 1980's, they have proven ineffective in adjusting resources to meet the changed circumstances.

The agricultural sector, with its export orientation, is heavily dependent on world market growth if resources are to be fully employed. Slow world growth and restrictive economic policies, together with aggressive policies of other exporters, have diminished export demand by perhaps 20 to 30 million metric tons per year in the early 1980's.

In 1984, the world economy is recovering but improvement has been and likely will continue to be slow through the decade. Heavy debt service costs in developing countries are making growth both risky and uneven. Overall, it now appears that even with moderate economic and population growth, but barring widespread bad weather, the world probably will not require full use of U.S. production resources in the next several years.[8]

Current policy, even if administered with an uncommon degree of foresight and with modified incentive levels, will not adjust resources adequately or efficiently. Stocks will rebuild from current levels. Acreage reduction and land diversion programs will continue to be necessary to restrain production. With favorable weather over the next few years, some 25 to 30 million acres likely would need to be diverted annually. Deficiency payments could average $4.6 billion annually and land diversion and storage costs another $1.7 billion, for a total of $6.3 billion, sharply higher than under earlier bills. The $4.6 billion average deficiency payment, for example, is more than four times greater than the $641 million average for the 1977 act.

Because present policy has the implicit purpose of ensuring farmers economic incentives to maintain or increase production even when surpluses persist, it is both expensive and ineffective. A more appropriate policy would be to help farmers adjust and protect resources.

Policies that focus primarily on facilitating the shift of vulnerable surplus land to conserving uses could be expected to reduce surpluses and Government costs, to increase the production provided to the Nation's soil and water, and could do so without long-term reductions in farm income. The current emphasis on farm income supports would be reduced while increasing the importance of programs that deal with economic stability and orderly resourse adjustment as the industry competes in today's intensely competitive world markets. Finally, such a policy could distribute benefits more equitably as well.

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[7] Norman Berg reported in the Washington Post, March 21, 1984.

[8] The basic outlook for world food demand and production are from "World Agriculture: Review and Prospects into the 1990's," Winrock International, Morrilton, AR, December 1983.

These important objectives could be achieved by more than one system of policies, of course. The following structure is one option designed to utilize familiar policies and programs whenever appropriate on the grounds that political support for the novel and untried will be more difficult than for modifications of programs well known and understood.

AN INTEGRATED CONSERVATION-COMMODITY POLICY OPTION

The option has the following four main elements:

An agricultural resource conservation policy that integrates conservation and commodity programs, including a long-term conservation land reserve to help farmers shift their most erodible land to sustainable productive uses:

Reserves for commodities and land to ensure adequate supplies for domestic consumption and export and to ameliorate economic instability;

Investment and income stabilization programs, with price deficiency payments limited to smaller farms and price support loan rates based on recent market prices; and

More equitable distribution of program benefits.

Intergrating conservation and commodity policy

Central to the option is a new national policy for agricultural resource conservation. The maintenance and improvement of both the productivity and quality of the Nation's soil and water resources would become a central aim pursued through all activities of USDA and other agencies of the Government.

The option would directly integrate commodity and conservation policy. Initially, as much as 30 million acres of the most highly erodible cropland would be bid into a long-term conservation reserve to facilitate its conversion to sustainable productive uses. The first step would be the specific identification of this highly erosive land, and its removal from each farm's cropland base so that production from these acres would be ineligible for commodity program benefits. Second, farmers would bid for contracts to remove vulnerable land from intense crop production for 7 to 10 years. In the event of very short supplies, this land could be released for production of specific crops.

This approach has the potential for sharply reducing the cost of conservation. Based on experience with earlier long-term diversion programs, it could cost as little as $35 per acre per year, roughly $1 per ton of soil saved, much less than the current Agricultural Conservation Program [ACP].[9] Moreover, this approach would facilitiate adjustments in production capacity. By holding land in reserve, it also could serve as a hedge against tight supplies should this become a problem.

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[9] American Farmland Trust, "Soil Conservation in America: What Do We Have to Lose?" 1984, p. 67. The cost per ton of soil saved between 1975 and 1978 was estimated to be $2.22. The cost was estimated to be $1.66 in 1982 and $1.50 in 1983.

The conservation reserve would be a transitional device to help farmers convert highly erodible land to more appropriate uses. It would reduce artificial incentives to cultivate marginal lands by removing them from cropland bases. Together with a strong "sodbuster" law, the reserve would avoid incentives to bring new marginal lands into production.

The second step in integrating commodity and conservation programs would be the establishment of a 3-year land diversion program to work in tandem with commodity reserve programs in the event that surplus production persists. When the commodity reserve was at desired levels and production was expected to boost stocks above normal carryover levels, a 3-year, Supplemental Land Diversion Program would be offered. Bids would be accepted from farmers to divert a specific amount of acreage for up to 3 years with payment based on the production history of each farm.[10] The land would be required to be converted to soil conserving uses. Only land in the farm's 5-year production base could be offered. The program also could be structured to provide a 10-percent premium for diverting land classified to have moderate and high erosion potential.

This diversion program, with up to 3-year contracts, could reduce the cost of establishing cover crops and make land improvement more feasible. It would reduce "slippage" in productive adjustment by requiring the use of 5-year production histories and the bid system for land of proven productivity.

Addressing economic instability

A chief economic purpose of the option is to diminish the impact of price and investment instability caused by growing dependence on export markets at the same time major conservation goals are achieved. Instability could be addressed in three ways: By more realistic economic incentives to guide production decisions; by continuing the system of reserves in a modified form, and by reducing excess capacity by diverting land to conserving uses.

The option would offer farmers economic supports consisting of price support loans and, in some cases, price deficiency payments, with the price deficiency payments limited to farmers who sell less than $150,000 annually (with a $30,000 payment limitation). Such limits would ensure that incentives for production adjustment come from market prices rather than the farm programs. However, the Land Diversion Program initially could affect prices by reducing production surpluses substantially.

Target prices and loan rates under the option would be generally lower than current levels to ensure that program incentives work to adjust production (table 1). Since land diversion would depend on bids, all producers would be eligible for price support loans, and all producers in the target group would be eligible for price deficiency payments. The loan rates would be a minimum of 90 percent of the average farm level price over the past 5 years, excluding the highest and lowest years. The Secretary of Agriculture would have limited authority to reduce the minimum by as much as 10 percent per year.

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[10] USA establishes and maintains records of crop area and yield by farms for participating farmers. Diversion payments per acre would depend on land productivity based on offical records.

TABLE 1.—TARGET PRICES AND LOAN RATES, CURRENT POLICY AND OPTION, 1986–87

Commodity	Target prices		Loan rate	
	Current policy	Option	Current policy	Option
Corn (dollars per bushel)	3.03	2.60	2.55	2.36
Sorghum (dollars per bushel)	2.88	2.45	2.42	2.25
Barley (dollars per bushel)	2.60	2.21	2.08	2.19
Oats (dollars per bushel)	1.60	1.36	1.31	1.33
Rye (dollars per bushel)	NA	NA	2.17	2.10
Wheat (dollars per bushel)	4.38	3.70	3.30	3.22
Rice (dollars per hundredweight)	11.90	9.10	8.00	7.88
Soybeans (dollars per bushel)	NA	NA	5.11	5.11
Cotton (cents per pound)	.81	.69	.56	.56

NA = Not applicable.
Source: EPI.

The commodity reserve would be a modification of the current program, with a relatively small feed grain reserve target of 10 percent and a wheat reserve of 20 percent of average total use (domestic plus exports) for the past 2 years. It would be filled by bid following a call for offers to store a specific amount of grain. The offer would be in terms of a storage payment per bushel for an extended period (perhaps 3 years). Such grain would be eligible for the regular CCC loans at the general level and interest rate. The loan could be redeemed and the grain sold at any time at the owner's discretion. There would be no specific release price or other restrictions.

An effective program to reduce instability would be especially important to moderate sized family farmers. These relatively small commercial farmers are heavily dependent upon farm income but frequently lack adequate cash flow. As a result, they tend to be hard hit by economic instability and its wide swings in prices and incomes. Many of these operations are efficient and can be expected to choose to produce rather than bid to divert land in the short-term, 3-year diversion program. Reliance on a bid diversion program would permit them to continue full production without loss of eligibility for economic protection programs.

To further focus the programs on smaller commerical farmers, the option would restore assistance to small- and moderate-sized farmers as the primary mission of the Farmers Home Administration [FmHA]. Especially since the expansion of farm emergency loans, FmHA has become much more of a lender to large commercial farms at the expense of its original mission of assisting the family farm. The option would reestablish priority for assisting farmers who cannot get adequate private credit and who benefit from technical assistance through the Farm Ownership and Operating Loan Programs.

Program characteristics

The outcome of a continuation of current policy and the option have been projected, based upon plausible assumptions about future demand conditions, technological impacts, land use, and weather.[11] Table 2 compares selected measures of the agricultural industry under both scenarios. While the estimates are only indications of future responses of prices, production, and commodity use, they are useful for comparisons between policies. They indicate that the option considered would operate quite differently than an extension of current policy.

While the option would depend on tools very similar to those available under current policy, its cost would be much less because it would work toward significantly different objectives. The major long-term Land Conservation Program would reduce the need for short-term diversion, but both programs would be needed during the first 2 years of the bill. In 1986-87, 48 million acres of land would be diverted to conserving uses, 30 million acres in the long-term reserve and 18 million acres in the short-term diversion program. For the succeeding years of the bill, production and use would be in a closer balance, and successively smaller diversion programs would be required.

TABLE 2.—CURRENT POLICY AND OPTION

Item	1986-87		1987-88		1988-89		1989-90	
	Current policy	Option	Current policy	Option	Current policy	Option	Current policy	Option
	Millions of acres							
Land diverted:								
Long term		30		30		30		30
3 year		18		4		1		1
Total	28	48	28	34	30	31	26	31
	Millions of dollars							
Deficiency payments	4,714	0	4,730	0	4,653	0	4,254	0
Land diversion payments	1,278	2,341	1,301	1,317	1,323	1,082	1,179	1,081
Long term		1,050		1,050		1,050		1,050
3 year		1,291		267		32		31
Reserve storage payments	494	368	501	377	463	389	395	402
Total	6,486	2,709	6,532	1,694	6,439	1,471	5,828	1,483
Farm value of production	52,821	52,407	54,082	58,220	55,865	62,569	57,437	66,619
Total	59,307	55,116	60,614	59,914	62,304	64,040	63,265	68,102

Source: EPI.

Stock levels would be lower each year, but still adequate to meet market needs in the event of short crops. The projections shown above assume favorable weather for the 4 years of the next farm bill. In the event of unfavorable weather, the situation would change somewhat. A drought as severe as that in 1980 for spring planted crops and 1974 for wheat would reduce production by 49 million metric tons and ending stocks by about 27 million metric tons. Even with such a large production decline, beginning stocks would not fall below 77 mmt and would be adequate, although in such a year the supply would become relatively tight, as was the case in 1983-84.

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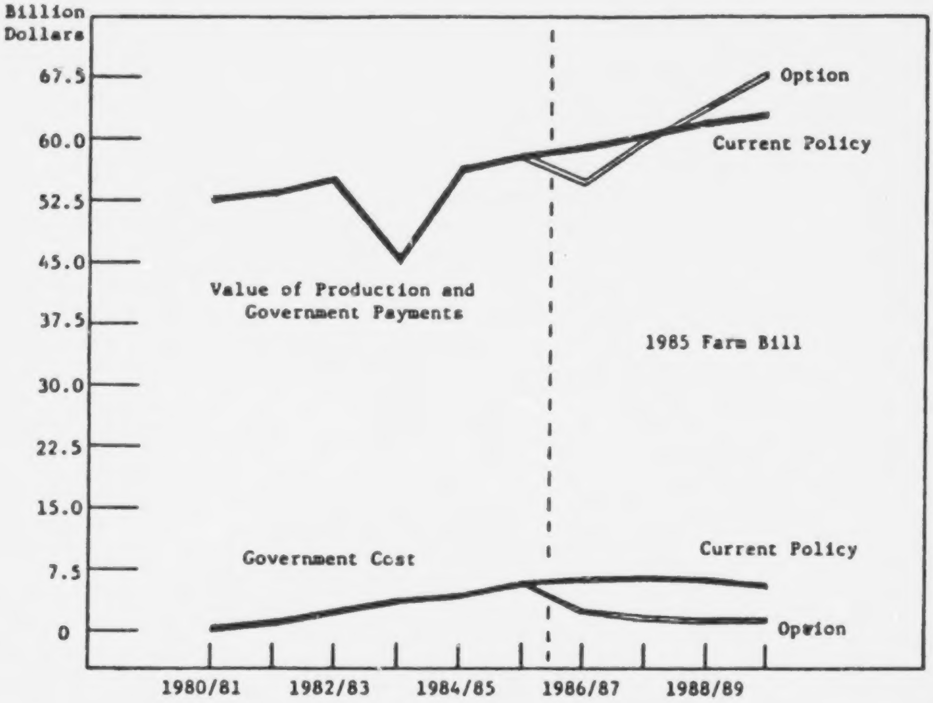
[11] See appendix for details.

The proposed program would cost much less than an extension of current policy, $18 billion less over the 4-year period. Price deficiency, land diversion, and storage payments would average $1.8 billion per year, compared with $6.3 billion under current policy (chart 4).

CHART 4.—VALUE OF PRODUCTION AND GOVERNMENT COSTS



Source: Historical data from CCC President's Budget Estimates, ASCS, USDA, June 28, 1984 and EPI projections.

Deficiency payments, in particular, would drop sharply. Even with target prices frozen, current policy implies $18.4 billion in deficiency payments over the 4 years. Under the option, the program would be available to moderate size farmers but no payments are projected because the smaller supplies projected would mean market prices higher than target prices.

Land diversion payments would be greater under the option since a moderately large land retirement program would be in place. By the second year, however, land diversion costs would begin to decline and would be lower than under current policy for the last 2 years of the program, largely because of the more effective bid system. In the later years, program costs would be primarily for the long-term retirement program which would cost just over $1 billion annually.

Cash receipts from the program crops would be lower during the first year of the option, but would increase in total as prices strengthen, especially during the third and fourth year. Cash receipts would average $60 billion under the proposal, $55 billion under current policy. Cash receipts plus Government payments for the 4 years would be up 0.7 percent, averaging $61.8 billion under the proposal compared with $62.4 billion under current policy.

Observation

The foregoing analysis is designed to provide a beginning rather than a conclusion. It suggests that the shortcomings of current agricultural policies are serious and fundamental, and that they are unlikely to vanish in the near future even as the world recovers from the slow growth of the early 1980's. Furthermore, the study suggests that more effective and equitable policies and programs can be designed. Based on comparison of the policies described above and estimates of economic responses for the life of the 1985 bill, the policy option appears likely to cost the Government far less than would an extension of current policy. It would facilitate resource adjustment and reduce surpluses, thus helping to alleviate the instability affecting the agricultural economy, while protecting a major share of the Nation's most vulnerable land. Because better designed policies hold the promise of more effective programs at far lower cost, they deserve serious consideration during the farm bill debate of 1985.

DIAGNOSING AND TREATING FARM PROBLEMS

(By Luther Tweeten)*

That many farmers in 1983 and 1984 were experiencing economic hardship was evident in economic indicators, press reports, mob action at foreclosure sales, and formation of new farm protest organizations. That such manifestations of economic difficulties are not new is also apparent—economic cycles and farmer protests are as old as U.S. commercial agriculture itself. But that farm problems of 1983–84 fundamentally differed from those of the 1930's or 1960's may not be so apparent.

Economic problems, like medical problems, have symptoms, causes, and cures. The objective of this paper is to diagnose and suggest treatment for farm economic ills. We shall observe that what farmers view as problems are frequently symptoms of more basic economic ills. On occasion, it is useful to treat symptoms. But confusing symptoms with causes or treating symptoms as causes is usually bad economics as well as bad medicine. The last section selectively prescribes policy treatment for the ills diagnosed.

SYMPTOMS OF FARM PROBLEMS

Just as the medical doctor checks the patient's temperature, pulse, and other vital signs for symptoms of physical ills, so the economic doctor checks the patient's vital signs for evidence of economic ills. Economic vital signs to be examined for farm problems include:

(1) Excess capacity defined a normal production in excess of market demand at existing prices,

(2) Level, variability, and distribution of income and wealth of farm people,

(3) Level, variability, and distribution of rates of return on resources; and

(4) Other symptoms such as farm failure rates, Government interference with private decisions, and demise of the family farm.

EXCESS CAPACITY

At some price, the market will clear. Excess capacity exists because the Government wills it. Excess capacity here is defined as output under normal weather and stocks in excess of what the market will clear at politically acceptable prices.

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Table 1, summarizing the farm production balance in 1983, shows sources and disposition of excess capacity. Farm output fell 15 percent from 1982 to 1983 (Council of Economic Advisers, p. 326).[1] Output would have been 4 percent lower in 1982 with normal weather, and 1983 output would have fallen only 11 percent. Weather caused output to be 5 percent below normal in 1983, other things equal. If 1982 and 1983 weather would have been normal, farm output would have fallen 6 percent in 1983 due to the PIK and other acreage reduction programs.[2]

Table 1.—Farm output capacity balance sheet, United States, 1983

	Percent of output
(1) Reduction in output 1982 to 1983:	
Origins of reduction:	
Favorable weather in 1982	4.0
Unfavorable weather in 1983	5.0
PIK and other acreage reduction	6.0
Total	15.0
Disposition of reduction:	
Excess carryin stocks	8.0
Short carryout stocks	2.0
Flow excess capacity	5.0
Total	15.0
(2) Potential disposition of flow excess capacity at 55 percent of 1910–14 parity price:	
Increased exports with reduced Federal deficit, lower real interest rate, lower value of the dollar, and worldwide economic recovery	2.0
Increased domestic demand with strong economy	1.0
Reduced resources in farming, lower real interest rate	2.0
Total	5.0
Location of flow excess capacity:	
Grains	3.1
Dairy	1.4
Cotton, peanuts, other	.5
Total	5.0

Of the 15 percentage points of reduced output, 8 were required to reduce excessive carryin stocks to normal levels, assumed to be 1 billion bushels of wheat, 60 million tons of feed grains, 325 million bushels of soybeans, 5 million bales of cotton, and 10 billion pounds of milk equivalent. But the stock reduction proceeded below desired levels; 2 percentage points of the 15-percent drop in output reduced stocks below desired levels.[3] The remaining 5 percentage points of the 15-percent drop in output removed excess capacity to hold farm prices at 57 percent of 1910–14 parity after adjusting for normal weather and normal stocks.

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[1] Crop output fell 28 percent from 1982 to 1983 and feed grain output was cut almost in half.

[2] Normal production was calculated from equations estimated with annual data for 1950 to 1982 (Tweeten, March 1983). Production removed by diversion programs was estimated using yield and output data from individual commodities and is apportioned among commodities essentially as shown in the last rows of table 1. Another procedure yielding the same result is to multiply the elasticity of production for land, 0.23, by the 25 percentage reduction in land input from 80 million diverted acres, giving $(0.23 \times 0.25) = 0.06$ or 6 percent of output removed by diversion programs.

If the excess capacity is expressed for crops alone, it is 10 percent of normal crop output. The $30 billion cost of farm programs in 1983 was unusual, a more normal cost for maintaining farm income is $25 billion using direct payments with no limitations, $15 billion with an acreage reduction program, and $5 to $10 billion with a direct payment program with a $20,000 limitation to maintain incomes of only small- and mid-sized farms as suggested later.

[3] Stocks of wheat and dairy products remained well above needed levels in 1983.

At issue is whether this excess flow capacity of 5 percent represents chronic overcommitment of resources and sectorwide low income and rates of return on resources as in the 1930's and 1960's. Or is it a recurring manifestation of instability characterized by intermittent periods of a few good years and several lean income years that have plagued agriculture since its very origins? Table 1 provides clues. The 16-percent drop in exports from 1981 to the end of 1983 represents 3 percent of farm output. A recovery of only two-thirds of the loss is not an unlikely "one-shot" possibility if the Nation takes decisive action toward a more balanced budget. The result will be lower real interest rates, less foreign capital inflow, a lower value of the dollar in international exchange, and greater demand for our farm exports. Revived economics worldwide will also boost our exports. Another 1 percentage point "one-shot" demand increment can come from further recovery in the domestic economy.

Farm input volume increased 9 percent from 1975 to 1979, then fell 5 percent from 1979 to 1983. Another drop of 2 percentage points in input volume from 1983 levels is entirely feasible, especially since nearly two-thirds of all farm inputs are relatively flexible purchased inputs such as fertilizer and pesticides compared to the 1950's when half of all farm inputs were somewhat inflexible "farm-supplied" land, labor, and equity capital. Thus elimination of 5 percent excess capacity at equilibrium prices approximately 55 percent of 1910–14 parity is quite possible, although recovery may await the second half of the 1980's. Unlike the 1930's and 1960's, current excess capacity mostly is the result of somewhat transitory failure of exports rather than the more permanent excess resources (mostly labor) generated by rapid technological change in the 1950's and 1960's. The current excess capacity could be perpetuated by continued high, rigid price supports, however.

Excess capacity in resources and commodities behaves like a balloon filled with water. Squeezed on one end, it bulges at the other. The location of excess capacity mostly in grains and dairy as shown in table 1 is the result of deliberate Government policy. The Nation has capacity to overproduce any farm commodity at current prices if excess resources are devoted to it.

Given normal stocks, what would happen with normal weather if all production control was eliminated? Given an elasticity of aggregate farm output demand $B=-0.25$ in the short run (see Tweeten, December 1983), each 1 percentage point of excess capacity placed on the market reduces prices 4 percent and gross receipts 3 percent. Multiplied by 5 percent released capacity, the estimated reductions in prices and receipts are as follows: Impact on: [4]

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[4] If B is the price elasticity of demand for farm output, the elasticity of price with respect of a 1 percent increase in output is $F=1/B$, of gross receipts with respect to output is $F+1$, and of net farm receipts with respect to output is $(F+1)(TR/NR)$ where TR is total receipts and NR is net receipts. Thus, the percentage reduction in net farm income, especially after subtracting direct payments, is much greater than the reduction in gross receipts.

	Short run [1]	Intermediate run [2]	Long run [3]
Price 5F where F=1/B	20	10	0
Receipts 5(F+1)	15	5	0

[1] Short run (1-2 years) $B=-0.25$.
[2] Intermediate run (3-5 years) $B=-0.50$.
[3] Long run (over 5 years) $B=-1.0$.

The short-term impact, a 20-percent drop in prices and 15-percent drop in receipts, is severe from release of excess capacity on the market. The long-term impact is nil. The implication is that (a) holding excess capacity for extended periods by public programs is not only costly to the Government but of no benefit to farmers, and (b) the short-term consequences of release of excess capacity are severe. A transition program is useful to relieve the trauma of farm adjustment to uncontrolled production from the current excess capacity.[5]

The 1982-83 parity ratio, 57 percent, would have been lower without Government programs but may be sustainable without Government programs following return to more normal real interest rates, value of the dollar, and exports. An important issue is whether farms can cover costs with prices at 1983 levels. We shall observe that the good news is that normal equilibrium is within reach; the bad news is that receipts thereunder will not cover opportunity resource costs on the vast majority of farms.

LEVEL, VARIABILITY, AND DISTRIBUTION OF FARM INCOME AND WEALTH

Per capita farm income from all sources relative to that of nonfarm people has improved gradually if erratically since the 1930's. By the late 1970's, personal income of farm people had reached parity with income of nonfarm people on the average.[6] For the first time in decades, the farm economy was near equilibrium. But income from farming is highly variable from year to year (Tweeten, December 1983). A typical coefficient of variation (standard deviation as a percent of mean income) is 25 percent for the farming industry and at least double that level for individual farms.

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[5] Those who advocate immediate release of excess capacity on the market on the premise that a large quantity and lower price will increase farm receipts risk implementation of the agricultural equivalent of the Laffer Curve.

The allure of the Laffer Curve, which wrongly predicted that a decrease in Federal income tax rates would increase the tax take, bears much blame for current Federal deficits, high real interest rates, and high value of the dollar abroad.

[6] Farmers frequently use the parity ratio (defined as the current ratio of prices received to prices paid by farmers and expressed as a percentage of that in the 1910-14 period) as a measure of economic health. The inadequacy of that measure is apparent. For 1981 when the parity ratio was only 61 percent of the 1910-14 average, disposable personal income per capita of farm people averaged 89 percent that of nonfarm people. Real incomes per person were probably nearly comparable between the two sectors in that year if adjustments were made for cost of living and the value of farming as a preferred lifestyle. With the same parity price ratio in the early 1930's, farm income per capita averaged only about one-third that of nonfarm persons. If personal computers were priced at 100 percent of 1960 parity today, consumers would pay 100 times current prices for them.

Using the same real volume of resources (though a very different mix) as in 1910-14, farmers now grow nearly three blades of grass where one grew before as apparent in aggregate productivity. It makes no sense to pay as much in real terms for each blade of grass as paid in 1910-14 when today only one-third as much real resource input is required to produce it. The logic underlying a call for 90 or 100 percent of 1910-14 parity today is as compelling as a call for operators to farm precisely as they did in the 1910-14 period. The real price of farm output tends to decline as the real cost of production declines.

TABLE 2.—FARM NUMBERS, RECEIPTS, AND INCOME FROM FARM AND OFF-FARM SOURCES BY SIZE OF FARM, 1970 AND 1982, UNITED STATES

Item	Farm size by sales class				Total
	$200,000 and over	$40,000 to $199,999	$5,000 to $39,999	Less than $5,000	
Number of farms (1,000):					
1970	17	201	1,036	1,695	2,949
1982	112	579	885	824	2,400
Percent of all farms:					
1970	0.6	6.8	35.2	57.4	100.0
1982	4.6	24.1	36.9	34.4	100.0
	Dollars per farm				
Cash receipts:					
1970	79,412	88,124	19,960	2,255	18,570
1982	658,000	99,668	18,717	2,604	62,541
Percent of all receipts:					
1970	22.9	32.4	37.7	7.0	100.0
1982	49.1	38.5	11.0	1.4	100.0
Realized net farm income:					
1970	204,941	24,334	6,258	−142	4,825
1982	169,402	10,100	−406	−678	9,959
Off-farm income:					
1970	9,522	6,353	4,410	7,071	5,974
1982	16,647	10,762	16,600	17,843	16,430
Total net income:					
1970	214,463	30,687	10,668	6,929	10,799
1982	186,049	20,862	16,194	17,165	26,389

Source: USDA (October 1983). Off-farm income data for 1970 for large- and medium-size adjusted from 1979 Farm Finance Survey.

Several observations conerning farm income in 1970 and 1982 are apparent from data in table 2:

Income and sales (receipts) of farms are highly concentrated on large farms. In 1982, farms with sales of over $200,000 accounted for only 5 percent of all farms but for one-half of all sales and for 79 percent of al net income from farming. If current trends continue, only 50,000 farms will account for nearly two-thirds of all farm output by year 2000.

Net income from farm sources was negative on the average for farm classes accounting for 71 percent of all farms but for only 12.4 percent of farming receipts in 1982.

Off-farm income has risen dramatically since 1970 and has become more concentrated on smaller farms. Among farm classes, those with sales of $10,000 to $100,000 had the lowest income from all sources in 1982, a major turnaround from 1970 when smaller farms had the lowest income per farm. If people residing on farms were classified according to where they receive the majority of their income, most would be classified as clerks, doctors, operatives, lawyers, mechanics, electricians, or Government employees.

Farm income from all sources is becoming more equally distributed among economic sales classes of farms (Tweeten and Huffman, 1980). This paradox of increasing inequality of farm income and greater equality of income from all sources among farm classes suggests a fundamentally healthy adjustment to economies of size and resource rewards.[7]

Adding in a cost for farm equity capital (assuming a 10-percent rate of return) and for farm operator and family labor and management, farms with sales of over $500,000 in 1982 covered all direct and indirect costs while all other farm classes lost money.

The incidence of farm poverty, as high as 50 percent as recently as 1960, approached an incidence similar to that in the nonfarm sector by the late 1970's. Reduced poverty and a more equal income distribution trace to similar origns: the rise in off-farm earnings, exodus of small full-time operators, and investments in human resources. The considerably higher rate of poverty among farm families, 20 percent, compared to nonfarm families, 11 percent reported by Banks and Mills (1983, p. 18) for 1982 was caused by the recession in agriculture.

TABLE 3.—BALANCE SHEET OF THE FARMING SECTOR PER FARM (INCLUDING HOUSEHOLDS) BY SALES CLASS, UNITED STATES, JANUARY 1, 1970 AND 1983

[Dollars per farm]

Item	Farm size by sales class				Total
	$100,000 and over	$40,000 to $99,999	$5,000 to $39,999	Less than $5,000	
ASSETS					
Real estate:					
1970	567,842	209,719	83,765	32,855	73,172
1983	1,143,208	476,174	194,719	88,191	321,859
Other:					
1970	274,947	97,820	38,487	13,711	33,609
1983	422,849	168,973	65,586	31,462	115,109
Total assets:					
1970	842,789	307,539	123,252	46,566	106,781
1983	1,566,057	645,147	260,305	119,653	436,968
CLAIMS					
Liabilities:					
Real estate debt:					
1970	92,175	37,708	12,006	2,377	9,896
1983	200,950	62,379	20,206	8,813	45,623
Other:					
1970	117,035	30,961	8,725	1,195	8,086
1983	215,604	61,499	16,815	4,300	44,500
Total:					
1970	309,210	68,669	20,732	3,572	17,982
1983	416,554	123,878	37,021	13,113	90,123
Proprietors' equities:					
1970	633,579	238,870	102,520	42,994	88,799
1983	1,149,503	521,269	223,284	106,540	346,845
Total claims:					
1970	842,789	307,539	123,252	46,566	106,781
1983	1,566,057	645,147	260,305	119,653	436,968
Debt to asset ratio (percent):					
1970	24.8	22.3	16.8	7.7	16.8
1983	26.6	25.9	14.2	11.0	20.6

Source: USDA (October 1983, p. 136; and earlier issues.)

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[7] Income from all sources may be becoming more unequal among all farms, suggesting that growing inequality of income within economic sales classes more than offsets growing equality among sales classes.

Several observations are apparent from farm balance sheet data in table 3:

Nominal assets per farm increased massively from 1970 to 1983. Most of the increase was inflation—real assets in the farming industry incresed only 3 percent during the same period.

Financial health measured by debt-asset ratios alone is unequally distributed among farms. Large farms are more heavily leveraged than small farms. Many young farmers who started operations in the 1970's have high debt-asset ratios and are experiencing severe economic harship from depressed farm prices and incomes. But about half of all farmers have no debt.

Net worth of farmers averaged $346,845 in 1983. Proprietors' equity on farms with sales of $100,000 and over averaged over $1 million per farm. Even small farms with sales of under $5,000 had an average net worth of $106,540 per farm in 1983. As in the case of net income from all sources, farm wealth as measured by proprietors' equity has become more equally distributed among farm sales classes since 1970 (Tweeten and Huffman, 1980).

Debts increased faster than farm assets, raising the ratio of debt to assets from 17 percent in 1970 to 21 percent in 1983. Debt-asset ratios for the farming industry are low and favorable relative to those in nonfarm industries (Tweeten 1979a). Despite capital losses in the 1980's, the financial health of the farming industry as a whole remains sound.

Most farm assets are real estate, creating problems of cash flow on durable capital as will be noted later.

LEVEL, VARIABILITY, AND DISTRIBUTION OF RATES OF RETURN ON FARM RESOURCES

It is clear that farmers as a whole are not poor. Commercial farmers normally earn more income and have more wealth than nonfarmers (Council of Economic Advisers, p. 112). Farmers need not be poor to be underpaid, however. At issue is whether resources in farming earn as much as similar resources earn elsewhere.

Several observations regarding this issue are as follows:

From 1965 to 1980, total rates of return on farming equity capital from current earnings plus capital gains averaged well above returns on other major investment alternatives (U.S. Department of Agriculture, January 1981, p. 51). Equity returns were computed as a residual after subtracting all resource costs (including an opportunity cost for operator and family labor and management) from farm gross income. It follows that if farm equity capital opportunity costs were subtracted from net income to compute a residual return to operator and family labor and management, then that return also would be favorable relative to returns elsewhere.[8]

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[8] Alternative, more easily measured economic indicators support conclusions from data showing favorable long-term rates of return to farm equity. Most farm equity capital is real estate as noted in table 3. Rents less property taxes as a ratio to land values show current returns on farmland comprable to those calculated for equity capital.

As with farm income, rates of return on farming resources vary considerably from year to year. Strict comparisons with variation in rates of return elsewhere are difficult because net farm income combines earnings from operator and family labor and management components which can be separated only arbitrarily. Rates of return to farm equity capital have been more stable from year to year than returns to risk capital in the stock market. However, returns to farm operator labor have been less stable than returns to labor elsewhere.

As with farm income, rates of return in farming differ systematically by size and type of farm. Returns to dairy and tobacco producers tend to be more stable than returns to grain producers from year to year. Rates of return to resources on small farms have been systematically lower than returns to resources on large farms.

A highly important distributional dimension is the apportionment of returns into current and capital gains components. From 1960 to 1982, current rates of return on farm equity capital averaged only 3.5 percent with no apparent upward or downward trend. Real capital gains averaged 4.2 percent to bring total real rates of return to a highly respectable 7.6 percent. Capital gains are unrealized until assets are sold. The result is a severe cash-flow problem of which more will be said later.

OTHER SYMPTOMS OF FARM PROBLEMS

The price system rewards those who fortuitously invest their resources and farm efficiently; it penalizes those who do not. Many individuals and families have left the farm to employ their resources in the nonfarm sector. Consequently, farm population and farm numbers have fallen markedly since 1950 but at a considerably slower rate since 1970. Most of the farm-urban emigrants were youth. Some established farmers have been forced out by foreclosures and bankruptcy. The failure rate in farming traditionally has been lower than in other businesses, especially small businesses (Tweeten, 1970a). The farm foreclosure rate per 1,000 farms was 2.3 in 1980 and 2.9 in 1981 (U.S. Department of Agriculture, August 1981, p. 23). Although not strictly a comparable concept to the foreclosure rate, the failure rate per 1,000 commercial and industrial businesses was 4.2 in 1980 and 6.1 in 1981 (Council of Economic Advisers, 1983, p. 268).

Natural resource depletion

Soil and water depletion is a serious problem in some areas. In the southern Great Plains portion of the massive Ogallala aquifer, water is being mined for agricultural irrigation without much recharge. Most economic supplies will be exhausted in a few decades. The region will revert to mostly dryland farming. In general, the West faces difficult choices in allocating scarce water resources within agriculture and between agricultural and other uses.

Approximately one-fourth of our cropland is experiencing soil loss in excess of established tolerance levels (Tweeten, 1983). Simple linear extension of farmland losses from urban encroachment and soil erosion indicates total depletion of soil resources in 300 years. Past trends will not continue, and recent data indicate a marked slowdown in agricultural land lost. The above considerations notwithstanding, scarcity of water and land in no way threatens food supplies in the foreseeable future.

Government involvement

In centrally planned countries, government involvement in agriculture would hardly be viewed as the symptom of a farm problem. But in the United States, farmers prefer to obtain their income from the market and view Government production controls as an unfortunate if sometimes necessary infringement on the freedom of each farmer to make production and marketing decisions.

Tax dollars spent for farm programs have high opportunity cost because they can be used to promote a more nearly balanced Federal budget or serve other worthy ends. The level and stability of farm income and rates of return depicted earlier were made a little more favorable by Government farm price and income supports. But pressures are intense to reduce the burden on taxpayers of Government outlays for farm programs which totaled nearly $30 billion in 1983. Farmers have a major stake in macroeconomic policy and can expect to share in the budget cuts needed to restore Federal fiscal responsibility.

Demise of the family farm

The changing structure of the farming industry is viewed by many as a symptom of farm problems. The Nation cherishes the family farm, defined as a crop and/or livestock production unit on which the operator and his immediate family provide most of the labor, management, and equity capital. To survive, many farmers have resorted to strategies of part-time farming, hiring labor, renting land, relying on financial capital from off-farm sources, and vertically coordinating with agribusiness firms. The proportion of farm output under vertical coordination increased from 20 percent in 1960 to 30 percent in 1980. These accommodations compromise the family farm ideal. Family farms may constitute a stable proportion of all farms, but numbers have fallen substantially.

Trends indicate eventual loss of the midsize family farm. Though more efficient than small farms, midsize farms lack their off-farm income to cope with cash-flow and instability problems. And midsize farms lack the sophisticated risk management strategies and market economies used by larger farms to cope with cash-flow and instability problems. Relative variation of net income from all sources is much less on small farms than on large farms. Medium-size family farms experienced the greatest relative variation in income from all sources at least in some time periods (Tweeten, December 1983, table 9). Ability to control costs and access to diverse sources of debt and equity capital make risk more tolerable on large farms than on midsize farms. The public probably is not much concerned over economic failure of very large farms. The midsize family farm is at risk, and many view its potential demise as the symptom of serious deficiencies in agriculture worthy of correction.

Some fear that changes in farm structure will concentrate control of production decisions in so few hands that farm and food prices will be manipulated and food supplies threatened. No substantive evidence supports such fears for the foreseeable future. The broiler industry is the most concentrated of major agricultural commodites but its performance in terms of product quantity, quality, and price has been favorable if not exemplary. Even if one integrated agribusiness firm controlled all broiler production, it should have to compete with beef and pork producers as well as with foreign broiler producers.

SUMMARY

Symptoms examined in this section suggest several major economic concerns relating to agriculture:

(1) *Cash flow.*—Rates of return on investment and farm income per capita comparable to those elsewhere are of little consolation to farmers who are unable to service cash-flow requirements. Cash flow is primarily a problem of commercial farms, especially of heavily leveraged young operators.

(2) *Instability.*—Commodity prices and incomes are unstable for all sizes of farms. Variation in food quantity and price also troubles consumers at home and abroad.

(3) *Low income.*—Chronic low farm income, once a sectorwide problem, has become a case-poverty problem associated with certain high-risk groups within agriculture. Modern, efficient, commercial farming entails such large asset requirements that persons with limited resources cannot enter. Although the incidence of farm poverty has declined substantially in recent decades, poverty is not rare among full-time small and medium-size farms, especially among those with aged operators.

(4) *Environment.*—Soil conservation is the principal environmental problem in agriculture. Efficient use of water supplies is a worthy but so far elusive goal. Food health, safety, and quality are of concern but cannot be dealt with here due to space limitations.

(5) *Family farm demise.*—Part-time, small and large farms can cope with cash flow and instability problems more easily than can full-time family farms, long prized as the backbone of the rural economy if not the Nation.

CAUSES OF FARM PROBLEMS

The foregoing symptoms of farm problems have basic causes. Emerging realities suggest the following observations:

> (1) Traditional explanations for farm economic ills such as excess labor, asset fixity, rising opportunity cost of labor, and of technology increasing supply at a greater rate than demand (treadmill theory) no longer suffice (see Cochrane; Heady; Johnson and Quance). The widely held view that farmers supply more output when product prices fall is convenient fiction (see Tweeten and Quance). The theory that farm returns are low because farmers are exploited by input supply and product marketing firms is without substance.
>
> (2) A growing proportion of farm economic ills are equilibrium problems which will remain even if farmers make all de-

sired adjustments to economic forces. The equilibrium theories of farm problems explain why returns in agriculture appear to be low when, in fact, they are not.

(3) A disturbing portion of farm economic ills including the cost-price squeeze in 1980 initiating the 1980's recession, the chronic cash-flow problem, and reduced farm exports since 1982 trace to macroeconomic policies of the U.S. Government. Forces of nature continue to cause economic instability, but a disturbing portion of instability in agriculture is man made by macroeconomic policies. The big story in farm policy is the lesser role of technology and the greater role of macroeconomic policy in causing farm problems. The following pages of this section elaborate on these elements.

FARM SUPPLY AND DEMAND CURVE SLOPES AND WEATHER SHOCKS

There continues to be merit in the traditional view that farm prices and income are unstable because slopes of short-run industry supply and demand curves are steep.[9] However, each farmer is faced with a perfectly elastic demand—his decision to supply more or less to the market will not change the price he receives. Farmers continue to be price takers, not price makers. For the most part, farm markets do not feature administered or negotiated prices which have characterized more stable pricing arrangements in the nonfarm sector.

It is well known that supply shifts widely because of unpredictable forces of nature including weather, pests, and disease. These same forces overseas create instability in demand for U.S. farm exports. Biological processes of farm production do not lend themselves to rapid adjustments in output to correct imbalances.

THEORIES EXPLAINING WHY RETURNS IN FARMING APPEAR TO BE LOW WHEN THEY ARE NOT LOW

To explain why farm resources appear to receive low returns in equilibrium when in fact real returns are favorable, I have advanced two theories: (a) the decreasing-cost theory, and (b) the cash-flow theory.

Decreasing-cost theory

The decreasing-cost (increasing returns to size) theory helps to explain why rates of resource returns in farming appear to be lower than in other sectors even in equilibrium (Tweeten, 1979b, ch. 6). To illustrate, figure 1 is constructed by first dividing all resource costs (including a return to operator and family labor, management, and risk) by all returns on each of eight economic sales classes of farms. The result shows average cost within a size class but marginal cost among classes. Figure 1 also shows the parity ratio required to cover all resource costs.

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[9] A growing share of output going to the more price elastic export market relative to the price inelastic domestic market has increased output demand elasticity over time. But short-run demand and short-run supply of farm output remain price inelastic. Hence, less output raises farm prices and receipts in the short run. A notable exception is when large stocks are accumulated under Government programs. Programs holding reserve capacity tend to make aggregate supply including stocks highly elastic at release prices and demand highly elastic at acquisition (loan) prices. This price structure creates stability but at prices unacceptably low to producers. Market supply and demand are elastic in the long run so that supply controls imposed for extended periods do not raise farm receipts (Tweeten, December 1983).

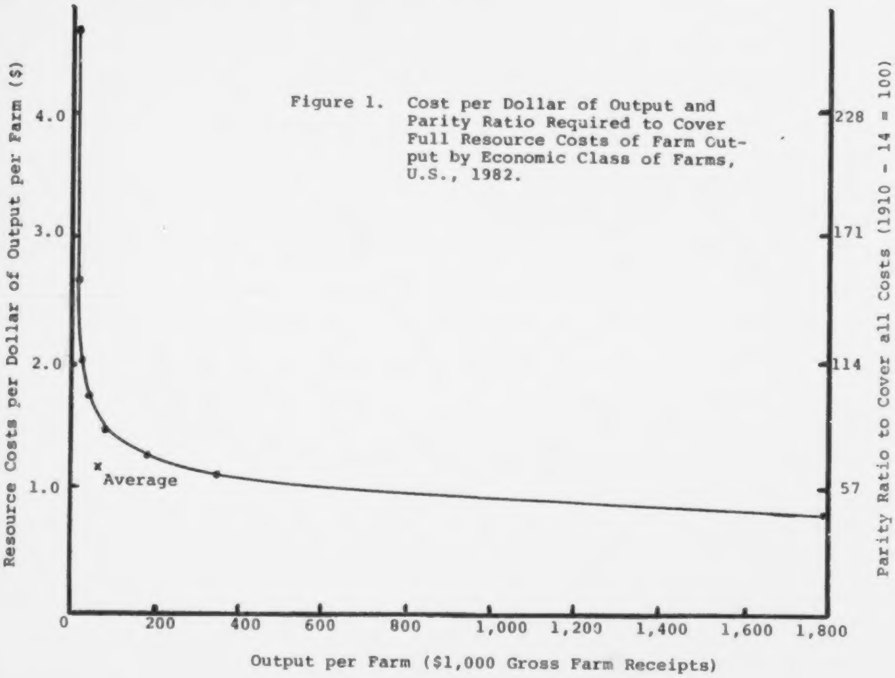

Figure 1. Cost per Dollar of Output and Parity Ratio Required to Cover Full Resource Costs of Farm Output by Economic Class of Farms, U.S., 1982.

Over 200 percent of 1910–14 price parity was required to cover all resource costs on small farms in 1982. Only 53 percent of parity was required to cover all resource costs on the largest two classes of farms.[10] On the average, the largest two classes required $0.92 to produce $1 of output in 1982. Operators of adequate size, efficient farms quite rationally bid up the price of land until returns are comparable to those on alternative investments. This price is clearly too high for smaller, less efficient farms. If operators of such farms depended on farm earnings to pay all costs of farming, they could not enter or survive. Small full-time farming units, once numerous, mostly have been discontinued, or become larger or part-time operations. Comparatively few remain.

Personal interviews with operators of small farms reveal that typical monetary returns from an hour spent on farm work is much less than from an hour spent on off-farm work (Rogers). Part-time operators remain on the farm, not because they have no alternatives or are unaware of them, but because they value the farm way of life. When the psychic value of farming is added to money value of farm output, the "social" unit cost curve comparable to the private unit cost curve in figure 1 becomes nearly horizontal. Tax advantages and subsidized rural services also help maintain small farms.

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[10] Farms with sales of over $500,000 covered all resource costs at farm prices only 46 percent of 1910–14 parity. This finding is misleading, however, because many of these farms depended on marketing order pricing and specialty crops not characteristic of other farms. Hence a more realistic cost per dollar of output and parity ratio is an average for the largest two classes of farms.

Costs for all farms are calculated for normal real interest rates (nominal less capital gains) of 8 percent on short-term capital and 5 percent on long-term capital, including equity. The real resource cost estimates for 1982 are similar to those for 1981 (Tweeten, March 1983), hence appear not to vary greatly from year to year.

Additional points suggested by figure 1 are notable:

(1) Economies of farm size appear to have extended beyond the traditional family farm of approximately $100,000 in sales and $1 million in assests. Market economies in the form of input price discounts and product price premiums undoubtedly play a role. This marginalization caused near demise of the full-time small farm; could the process now cause demise of the full-time family farm?

(2) When all resources are valued at opportunity cost, large farms are about breaking even and smaller farms are losing money. It follows that average equilibrium farm returns will tend to fall below those elsewhere. The puzzle is why, in view of figure 1, conventional measures of resource returns in agriculture historically appear so favorable relative to alternatives.

Cash flow

National inflation creates a cash-flow problem in agriculture that is easily confused with a low-return problem. The conceptual basis for the cash-flow problem is illustrated in table 4 for farmland investment. A well-functioning market with informed, rational participants desiring a real rate of return r on investment will bid the farmland price to Po given current rent Ro and expectations of future rents increasing at real rate i′ in excess of the general inflation rate i. Assuming that real interest rates and real rates of return desired on farmland are equal, with rents constant in nominal terms ($i'=0$) the normal or equilibrium current rate of return on farmland will be $r+i$ and the interest rate also will be $r+i$ on farm mortgages. The cash-flow deficit, defined as the current rate of return on farmland less the nominal interest rate, will be zero whatever the inflation rate under such circumstances. Farmland behaves like a fixed interest bond when returns are constant in nominal dollars over time.

Table 4. Key Parameters Explaining Cash-Flow Problems in the Farming Industry

Expected Future Rent (Rt) (t=1,2,...)	Present Value of Farmland (Po)	Long-Term Real-Rate of Return on Farmland	Current Rate of Return on Farmland (Rt/Pt)	Nominal Interest Rate	Cash-Flow Deficit Rate
	(Dollars Per Acre)	(------------------------	Percent	------------------)	
(1) Rents constant in nominal terms	$\frac{Ro}{r+i}$	r	r + i	r + i	None
(2) Rents constant in real terms	$\frac{Ro}{r}$	r	r	r + i	i
(3) Rents increasing at rate i' in real terms	$\frac{Ro}{r-i'}$	r	r - i'	r + i	i + i'

Source: Tweeten (June 1981).

Land earnings and rents have tended to rise with inflation in past decades as depicted in situation (2) in table 4. If rents exactly keep pace with inflation to provide constant real rents, the equilibrium current and real rate of return is r and the cash-flow deficit is i. Thus the cash-flow under normal circumstances on a fully indebted acre (perpetual mortgage) valued at $2,000 is zero if the inflation rate is zero but is $200 if the inflation rate is 10 percent.

The cash-flow problem is more severe if land earnings are expected to increase in excess of the inflation rate by rate i′, the third situation depicted in table 4. Since r appears to be approximately 4 percent, the ratio of land price to land rent is expected to average 25 and is invariant to the inflation rate under condition (2) with $i'=0$ in table 4. Because of sharply rising exports and lagging productivity rates, many land market participants as well as economists in the late 1970's expected i′ to average 2 percent per year in the future. If i′ is expected to be 2 percent in perpetuity, then the equilibrium land price-rent ratio increases to 50 and the current return to farmland (again invariant to the inflation rate) is only 2 percent as noted from the framework in table 4. Even in the absence of inflation the cash-flow deficit is 2 percent of land price when i′ is 2 percent. With expected inflation of 10 percent the cash-flow deficit is 12 percent. Thus current earnings from 3 acres are required to pay mortgage interest on 1 acre. Because i′ is rarely expected to exceed 2 percent while i is expected by many to average at least 6 percent in future years, it follows that inflationary expectations rather than real earnings expectations explain most of the cash-flow problem in agriculture.

The foregoing analysis considered land pricing and cash-flow assuming a constant anticipated rate of inflation i. If the inflation rate changes from that expected, the unanticipated changes will generate real wealth gains or losses—another major source of economic instability to farmland owners. Unanticipated low, even negative, real interest rates in the 1970's transferred billions of dollars from creditors to debtors. Unanticipated high real interest rates in the 1980's transferred billions of dollars from debtors to creditors.

As net debtors, farmers benefited from anticipated inflation in the 1970's but lost billions of dollars from disinflation in the 1980's.

Other factors contributing to cash-flow problems include the now large assets required for an economic farming unit and a family farm structure emphasizing owner-operations refinanced each generation. Separation of farm ownership from farm operation, a current trend, means more non-farm-ownership of farm assets in a corporate stock structure. Such structure reduces cash-flow problems but compromises the family farm ideal.

Expansionary fiscal policy combined with tight monetary policy in recent years has introduced a new and onerous wrinkle in the inflation cycle. High real interest rates generate cash-flow shortfalls as in table 4 condition (2) but without ultimately redeeming capital gains. Huge Federal deficits, anticipated for the foreseeable future even after the economy has reached full employment, require major Federal borrowing in financial markets. This raises real interest rates and crowds out private borrowing to finance business investment.

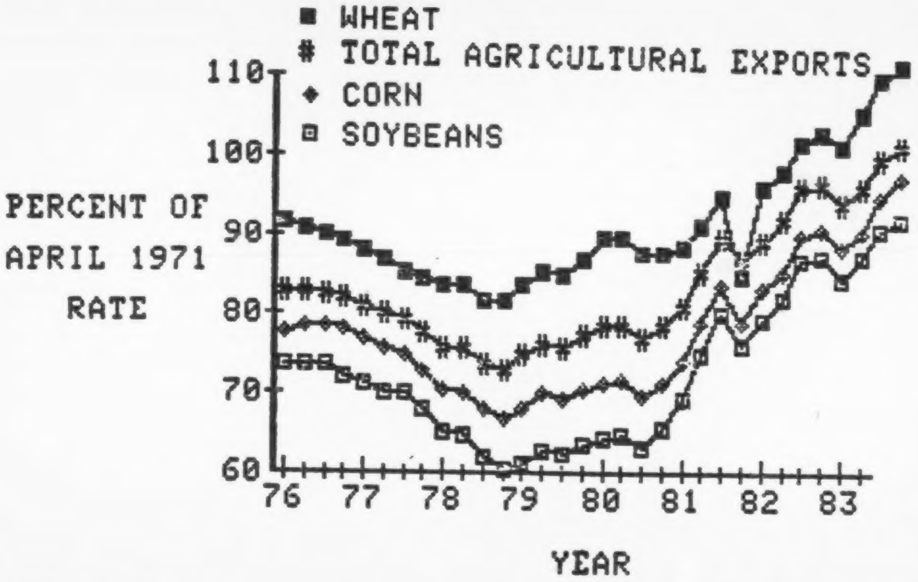
MACROECONOMIC POLICIES

Much instability in agriculture is man made—the product of Government policy at home and abroad. The shift in Soviet policy to import grain following a poor crop in 1972 is an example of instability in U.S. export demand originating from public policies of other countries. However, most of the instability originates from our own policy decisions, which also figure prominently in cash-flow problems depicted above.

Macroeconomic policies cause farm problems of instability through cost-price effects. The effects vary over the inflation cycle characterized by an expansionary phase of stimulative monetary-fiscal policy and a stabilization phase of restrictive monetary-fiscal policy. My most recent and complete econometric specification indicates that the initial, first year, impact of stimulative monetary-fiscal policy in the expansion phase of the inflation cycle is to reduce the ratio of prices received to prices paid by farmers up to 1 percent for each 1-percent increase in the general price level (Tweeten, July 1983). The initial cost-price squeeze stemming from inflation dissipates with time, but not before creating instability for farmers.

An example of the cost-price squeeze induced by macroeconomic policy was in 1980 when prices paid by farmers for inputs of non-farm origin increased by 16 percent. Real demand increased relative to real supply and prices received by farmers increased. But the ratio of prices received to prices paid by farmers decreased 10 percent.

Some of the most insidious macroeconomic effects are felt through international linkages. High real interest rates attract foreign investment in U.S. financial markets. The increased foreign demand for dollars relative to supply raised the value of the dollar in foreign exchange markets about 30 percent in recent years (figure 2).[11] As a result, prices of U.S. grains, soybeans, and cotton increased in terms of foreign currency, and demand for U.S. farm exports dropped (Dunmore and Longmire).



The worldwide economic recession attended by major financial crises in several developing countries also reduced overall demand for farm exports. Both worldwide recession and high value of the dollar trace in no small part to our macroeconomic policies.

Farm mortgage interest rates are now about 12 percent while the inflation rate is 4 percent. The inflation-adjusted real interest rate is 8 percent, far in excess of long-term historic real interest rates averaging 3 percent. Farmland has been priced in recent decades to provide approximately a 4-percent real rate of return. If the 8-percent real interest rate is permanent, it would require current farmland values to drop by half to adjust to the new equilibrium.

In my judgment, the current high real interest rate is transitory. Real interest rates in the long run depend on time preferences for present versus future consumption and real earning power of invested capital. These are very fundamental forces changing very little over time; they probably have not changed in recent years. As indicated earlier, the current high real rate is a product of strong demand for money brought about by Federal borrowing to finance the deficit in the face of a relatively tight money supply. There is uncertainty and expectations that the money supply will be eased to bring about at least a 6-percent inflation rate. This expectation comes in part from a belief that the Federal Reserve will need to expand the money supply to accommodate huge Federal borrowing and thereby avoid recession. Many investors believe that the Federal Reserve lacks discipline or capability to permanently restrict money supply and hold inflation to less than 6 percent per year.

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[11] Real exchange rates have increased only for wheat since 1971. Rates for aggregate farm exports were nearly the same in 1983 as in 1971 (Fig. 2). Confidence in the dollar as a secure currency has made the dollar the reserve currency of the world. This has contributed to the strong dollar at a cost to U.S. farmers in reduced agricultural exports.

The Federal Reserve will have to demonstrate its resolve by holding the inflation rate down for several years before investors change expectations to view price stability as permanent. Only then and with help from Government to control Federal deficits will real rates of interest fall to the historic normal level of 3 or 4 percent. In the meantime, farmers and others will be paying a massive economic cost for macroeconomic excesses including the unfortunate experiment with the Laffer curve. Farmers have a major stake in fiscal-monetary policies that promote economic progress with a reasonably stable general price level.

Policy Implications

Coping with farm economic ills requires attention to macroeconomic (monetary-fiscal) policy, trade policy, and commodity program policy. A policy instrument is matched with each of the five farm problems listed earlier.

POLICY PROBLEMS AND INSTRUMENTS

Problem: Cash flow

Main policy instrument.—Monetary-fiscal policy to promote steady national economic growth with a stable general price level.

An immediate need is to reduce real interest rates and value of the dollar by fiscal policy emphasizing a more nearly balanced full employment Federal budget. Delaying action until the Nation is drifting into recession would be a serious mistake.

"Full employment" now is probably at least 7-percent unemployment. Using monetary-fiscal stimulus to reduce unemployment below this level will cause inflation. Reducing unemployment below this level will require a restructuring of the economy to reduce manmade barriers to employment of marginal workers. I have elsewhere detailed needed structural changes in the economy (Tweeten, March 1981).

Problem: Instability

Main policy instrument.—A payment to farmers of 30 cents per bushel to store grain buffer stocks, with no specified acquisition or release price.

The private sector alone will not provide enough buffer stocks in part because of high private discount rates for risk accentuated by export embargoes and other massive Government interventions. The simplest and most direct means to augment the private sector and bring stock levels in line with social needs is to provide a Government subsidy to the private sector for storing buffer stocks. There is no reason to believe that Government-mandated acquisition and release prices would be superior to the proposed unmandated private-sector decisions of when to store and release stocks.

If nonrecourse loan supports and supply control are terminated as suggested below, an alternative to the fixed payment per unit is to maintain the farmer-owned reserve but with a cap. Any unfilled capacity in the reserve would be prorated to farmers according to their production base.[12]

If augmented reserve stocks are deemed an inadequate instrument to stabilize food supplies, and if reserves in the form of diverted acres are required, then the loan rate needs to be retained. The Secretary of Agriculture needs to be given discretion to adjust the loan rate from year to year so as to obtain the socially desirable reserve capacity in stocks and diverted acres. A 3-year moving average of market prices to set loan rates will not provide appropriate reserves.

Intermittent export embargoes imposed for foreign policy and other reasons contribute to our reputation as an unreliable supplier and are a source of instability and cost-price squeeze problems to farmers. Extended provision needs to be made for contract sanctity and for embargo authorization only in times of national emergency.

Rigid or predictable loan rates also contribute to our role of residual supplier by placing a floor under world prices. Competing exporters increase production and sell it in world markets just below our support prices.

Trade policies of other countries influence our agricultural exports in other ways. Many countries, most notably the Soviet Union and developing countries, pursue policies that discourage domestic production and turn to export markets when supplies are short. Others such as Japan and Western Europe subsidize agriculture heavily and turn to export markets to dump surpluses. Policies to protect their domestic agriculture insulate their farmers and consumers from world prices, thereby concentrating price adjustments in fewer free markets. Bilateral trade agreements do the same. The result of such policies is more unstable world prices and export markets than would be the case in the absence of such policies.

U.S. trade policies for nonfarm commodities also impact on our farm exports. The notable recent example was U.S. restrictions on textile imports from the People's Republic of China in 1983. China retaliated by cutting wheat imports from the United States.

In short, U.S. farmers have much to gain in level and stability of farm prices and exports by opening trade channels and allowing markets to work without interference from barriers imposed by public policy at home and abroad.

Problem: Low income

Main policy instrument.—Income maintenance programs with payments conditioned by income and focused on low-wealth families in poverty.

Commodity programs are a highly cost ineffective means to raise incomes of the poor. An alternative would be modifications in current welfare programs to provide more benefits to the intact-family working poor—a category not now well served but found frequently among the rural poor.

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[12] It is unwise to cap the farmer-owned reserve if nonrecourse loans are retained. Stocks accumulated through default on nonrecourse loans preferably are held by farmers under the reserve than by the government under the Commodity Credit Corporation.

Problem: Family farm demise

Main Policy Instrument.—Direct payments focused on small and midsize farms.

Voluntary supply controls have become costly and ineffective. As stated earlier, our price supports and supply controls make this Nation a residual supplier in price sensitive export markets. An elastic long-term demand makes sustained supply control counterproductive in raising farm receipts. As indicated earlier, for large and for small farms supply controls and price supports either are unneeded or fail to provide significant benefit. Middle-size family farms are most at risk. If commodity programs are to help preserve the family farm, a greater share of program benefits must go to midsize farms. That is impossible through supply controls that raise market prices for all. Furthermore, large farms accounting for most farm output must be included to control supply. The "price" of saving the family farm is to end supply control.

If the Nation wants to preserve the family farm by focusing benefits, the suggested alternative is to end loan rates and supply control but retain the target price with deficiency payments limited to say $20,000 per operator. Payments would be made only to day-to-day farm operators who share significantly in the returns to risk and management of the farm. Attempts by landlords to circumvent the limitation by dividing holdings would result in more family farms, presumably one objective of farm policy. To avoid the target price becoming a supply price that encourages overproduction, the production base for defining payments would be set the first year of a new program and would remain fixed for the 4-year life of the program. Target prices might be some percentage of the past 7-year average of market prices, dropping the high and low year. Or they might be set at the estimated nonland cost of production per acre divided by a 3-year moving or projected average yield.

Payment might be graduated with full payment on production up to say 30,000 bushels of corn or 25,000 bushels of wheat. Bases above those levels would subtract 50 cents of payment per additional bushel so that large bases would be ineligible for payment. Revenue insurance with the Government paying say one-fourth of the premiums might eventually phase out deficiency payments.

Problem: Environment

Main Policy Instrument.—Cropland easements.

The most serious environmental problem in Agriculture is soil erosion. To promote soil conservation, the Government would purchase crop easements under long-term contract on land subject to severe soil erosion. The farmer could hay or graze the land, but not crop it. An alternative or supplement would be outright purchase of whole farms in areas characterized by high erosion rates, combining purchased farms into hunting and fishing preserves and other recreational areas. Existing conservation programs would be changed to focus on erosion-prone soils.

A TRANSITION PROGRAM

The shock to the farming economy from immediate implementation of the above commodity program would be severe. A transition program can cushion the shock. This paper presents no transition program in detail, but one feature might be greater discretion for the Secretary of Agriculture to adjust loan rates. An alternative is a moving past average of market prices to set loan rates on grains until loan rates and production controls are phased out.[13]

A transition program for dairy would feature a price somewhat above market clearing levels on some portion—say for fluid consumption—milk output, with additional output receiving the market price. Government supports and controls would be terminated and marketing orders would administer a two-price plan with producers no longer receiving a blend price but the market price on additional output. The higher price on the fluid consumption portion would give dairy farmers an assured income; the lower price on additional output would restrain production.

In time all price supports, production controls, and other market support interventions would be terminated for all farm commodities, except perhaps for, one, a simple subsidy of say 30 cents per bushel to producers of grain who hold buffer stocks, and two, farm revenue insurance paid for mostly by producers.

SUMMARY AND CONCLUSIONS

Conventional theories explaining farm problems had lost much of their relevance by the late 1970's because the phenomena they proposed to explain (chronic low income, low prices, and low rates of return in agriculture) ceased to exist. Some contend that the farm recession of the 1980's signals a return to extended disequilibrium, excess production capacity, and overcommitment of resources much as characterized the 1950's and 1960's. While it would be reckless to claim full understanding, for several reasons I judge the current economic difficulty to be transitory instability rather than a return to the chronic low income of the 1930's or chronic excess capacity of the 1950's and 1960's.

One, the farm economic recession in the 1980's is the result of an inflation-induced cost-price squeeze in 1980, unusually favorable weather for crops in 1981 and 1982, and a high real interest rate along with worldwide recession and an overvalued dollar in 1982 and 1983 (Tweeten, March 1983). Although not temporary, high real interest rates, a high dollar, and worldwide recession are not permanent. The situation was aggravated by a 9-percent increase in input volume from 1975 to 1979 motivated in part by unwarranted expectations of continued farm prosperity brought on by excessive expansion in U.S. and worldwide money supply.

Two, current excess capacity is approximately 5 percent of normal output at 55 percent of 1910–14 price parity. This excess capacity now removed by supply control and stock accumulation can be eliminated by worldwide economic recovery, a more normal real interest rate, and a more normal value of the dollar in international exchange, domestic economic recovery, and a modest reduction in farm capital resources.

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[13] The success of this program in soybeans may mislead proponents of the moving average price. Soybeans are unique because of strong, increasing export demand; and excess capability, when present, removed by grain and cotton programs.

With return of a more normal value of the dollar and worldwide economic recovery, the estimated excess supply of resources would be 2 percent. The figure is small in relation to excess resource capacity averaging approximately 5 percent in the 1960's (Tweeten, 1979b, ch. 15). Then 40 percent of farm labor was redundant; now the excess capacity is largely adjustable capital rather than inflexible labor resources. It will be much easier to cut back on fertilizer, fuel, machinery, and other purchased inputs (much of it introduced in the 1970's) than it was to reduce mostly labor inputs in the 1950's and 1960's. A disproportionate share of adjustments will occur among midsize farms. Of course, sustained high Government price supports and unfavorable macroeconomic policy could prolong excess capacity and turn a transitory into a fairly permanent problem.

Dissipation of current excess capacity is unlikely to occur before the second half of the 1980's and, once achieved, is unlikely to feature average real farm prices above 1982–83 levels. Adequate-size, efficient farms that account for most of farm output cover resource costs at 50–55 percent of parity, and prices will tend to cover costs on these farms. This more or less normal price level will be a disappointment for most farmers and a genuine hardship to many midsized family farms.

Three, projections indicate productivity gains will average 1.5 percent annually in the next decade or more (Tweeten, March 1983). If U.S. farm exports increase 3 percent per year, demand will advance as rapidly as supply due to productivity growth at the above rate. In view of the 9 percent annual increase in our farm exports in the 1970's and the 5–6 percent annual increase in the 1950's and 1960's, export gains averaging 3 percent or more seem attainable in the next decade. The challenge is to get through the current situation to this more favorable long-term scenario.

Four, land was not overpriced in the 1970's based on reasonable expectations of trends in demand and supply for farm output (Tweeten, June 1981). Those expectations radically altered in the 1980's and land prices adjusted downward accordingly. The downward trend was halted by the Payment-in-Kind Program in 1983. By the second half of the 1980's land prices may again resume an upward trend approximately at the same average rate as the general price level in the economy as a whole. In the unlikely case that investors view 8-percent real interest rates of 1984 as permanent, land prices could fall up to half, however. Lower real interest rates in the second half of the 1980's will help reduce prices paid by farmers and cash-flow problems.

Five, a notable lesson from the past is that the market works and farm resources do adjust toward economic equilibrium, albeit slowly. The once massive resource disequilibrium, mainly labor, had largely disappeared by the late 1970's.

Six, the farming industry is in transition from a triple economy of small, medium, and large farms to a dual economy highlighted by a few large farms accounting for most output and by many small part-time operations accounting for most farms.

Seven, the two most serious economic problems facing commercial farmers are cash flow and instability. Sound monetary-fiscal policy is essential to address the cash-flow problem. Macroeconomic policies of this Nation have played a major role in worldwide economic recession, high real interest rates, and high value of the dollar which resulted in a sharp falloff of export demand. Our macroeconomic policies have also contributed problems of cost-price squeeze, real wealth redistribution, and economic instability.

Eight, American agriculture has been internationalized. Macroeconomic and trade policies are interpendent among nations. We must not be deceived, however. Today's international trade problems trace in no small part to our misguided domestic macroeconomic policies. Integrated world capital and trade markets mean that high real interest rates in the United States cause real high interest rates abroad. Protectionist trade policies not only are costly to countries which pursue them but also to other countries by creating more unstable markets and by restraining gains from trade in general.

Greater international cooperation and coordination is required in macroeconomic, trade, financial, and commodity policies. As the world recovers from the economic recession of the early 1980's, it is imperative to begin a new round of trade and macroeconomic policy negotiations. Such negotiations would center on reducing trade barriers and coordinating macroeconomic policy to promote steady growth without substantial inflation. As the lead world economic force, the United States needs to lead world economic reform.

Nine, decreasing-cost (increasing returns to size) and cash-flow theories of farm problems help explain why current farming returns will perennially appear to be low even when returns are in equilibrium and at parity with those elsewhere. Treating symptoms is sometimes necessay but can make a patient worse. For example, treating the cash-flow problem experienced by many indebted commercial farmers as a chronic low-return problem to be remedied with the medicine of higher price supports would increase returns on farmland above returns on alternative investments. Higher returns would be bid into farmland values. The undesirable outcome would be to provide a windfall gain to landowners, transfer dollars from lower wealth taxpayers to higher wealth landowners, and create even greater cash-flow burdens to beginning operators purchasing land at inflated prices. Confusing equilibrium low returns of most farmers (who as noted in figure 1 are producing and marketing at higher costs than some large operators) with an industry-wide low return problem to be remedied by across-the-board price supports for all farmers would create similar undesirable repercussions.

Ten, farm commodity programs designed a half century ago for a chronic low-income sector are inappropriate for today's internationalized agriculture. Commodity programs primarily address the instability problem in agriculture. But they can do so at less Treasury cost, less interference in markets, and less interference in farmers' decisions. Two aspects of commodity programs seem most relevant: (a) providing "safety net" income security to midsize family farms, and (b) providing price and quantify stability through buffer stocks of benefit to producers and consumers. Full-time midsize family farms are most at risk, and a greater share of commodity program benefits must be directed to them if the goal is to preserve the family farm at acceptable Treasury outlays. A direct payment program without price supports or supply controls would provide several desirable features. The program would provide direct payments of no more than $20,000 per recipient to active operators.

To reduce price and supply variability troubling both farmers and consumers, a farmer owned reserve with a cap or, preferably, a simple direct subsidy of say 30 cents per bushel of grain would be provided to farmers who store grain.

Eleven, the private market alone will not provide socially desirable levels of natural resource conservation of benefit to consumers as well as farmers. In the case of water conservation, however, the market price system needs fuller application to allocate water to uses with the highest value.

To conserve soil, the suggested program would feature Government purchase of long-term easements for cropping rights on erosion-prone land. The farmer could hay or graze the land but could not crop it for the life of the easement. An alternative or supplement would be outright purchase of continguous whole farms in erosion prone areas, converting the land into a wildlife refuge, hunting and fishing preserve, or other recreational use. Thus, the conservation easements would serve three purposes: (a) conserve soil, (b) hold some reserve production capacity off markets as insurance for later use when needed, and (c) provide recreational benefits.

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TAKING ACCOUNT OF COMPETITIVE REALITIES IN DESIGNING FUTURE U.S. AGRICULTURAL POLICIES FOR EXPORTS

(By Desmond A. O'Rourke) [1]

INTRODUCTION

The world market for U.S. agricultural exports is so diverse and complicated that it is tempting for the analyst to get bogged down in a mass of details and to miss vital, underlying factors. And it is almost natural to try to design policies which will deal with special circumstances as they arise.

For example, an embargo on soybean exports was imposed to protect domestic supplies; a special deal on dairy products was negotiated with New Zealand to reduce butter stocks; a subsidized grain deal was made with Egypt to wrap the knuckles of the European Community. One would cite countless other instances of ad hoc adjustments in U.S. agricultural policies to meet specific trade situations.

While many of these adjustments can have immediate desirable effects, one must be less sanguine about the long-term, cumulative or aggregate effects. Too often, the fundamental export realities are ignored by policymakers, but gradually reassert themselves, to the subsequent considerable discomfort of U.S. farmers.

UNDERLYING COMPETITIVE REALITIES

In incorporating policies for exports into overall U.S. agricultural policies, we need to be cognizant of five competitive realities.

One, over the next two decades, total agricultural trade is likely to grow. The growth of population, incomes and the desire for variety has stimulated trade in the past. Populations will rise inexorably. Most countries place a high priority on income growth. And that income growth will continue to have a high propensity to stimulate imports.

Two, the productivity of agriculture, both in the United States and overseas, will continue to grow. Thus, supplies available for trade will grow. Competition for markets will grow.

Three, real prices can be expected to continue to fall for most basic farm products as agricultural productivity continues to outstrip productivity in other sectors, especially the growing service sector.

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Four, the efficient will survive by adopting yield-increasing and cost-reducting technologies just as they have for over 50 years.

Five, those who lack the basic natural resources (including good soil, favorable climate, convenient location), adequate scale to afford new technologies, and competent management will slip further behind. Buttressing the inefficient can only reduce the competitiveness of U.S. agriculture, increase Government costs and build up stocks which depress the market price.

There may be temporary deviations from those competitive realities, but the forces underlying them are so strong that they will not, over the long haul, be denied.

DEALING WITH THOSE WHO DON'T FIGHT FAIR

The consequences of these forces are difficult for many farmers and for many governments to accept. When real prices in agriculture fall relative to nonagricultural prices, the market is signaling to marginal farmers that their resources can be used more productively out of agriculture. Again, this process is not new. It began with the industrial revolution and continues to be the way by which societies make economic progress.

However, the transition phase can be painful and can involve loss of capital, transfer costs and family and social disruption. Rather than face the consequences of the underlying forces, farmers and their representatives often tend to seek scapegoats. If the competitive pressures appear to be coming from another region or from a foreign country, there is a strong emotional urge to build a Maginot line against the invaders. Saving one's citizens from being abused by foreigners has almost universal political appeal.

The natural reaction of the foreigners when thwarted by protectionism is either to circumvent the barriers by subsidy or subterfuge or to erect offsetting barriers in their own markets. Each side can then, legitimately, accuse the other of "unfair" competition. This is the situation in which the United States finds itself relative to many of its major competitors.

Three broad strategies are available for dealing with this situation. The first, and perhaps easiest in the short term is a "truce," freezing the various protections at their current levels. The second is a "trade war," which could more aptly be called a "treasury war" since it pits nations against each other in terms of their ability to finance escalating subsidies and surpluses and rising prices to consumers.

In the long term, neither the strategies of "truce" or "trade war" can work because they ignore the dynamic nature of agriculture. Competitive relationships are never stagnant. The adoption of new technologies and management practices continually change the relative productivity and costs of different competitors.

In the long term, the only strategy that will continue to be effective is that which accepts the dynamic nature of agriculture and the inexorable forces of competition. Essentially this involves dismantling protectionism, subsidization and other impediments to trade.

This is the strategy that the United States should adopt in the next decade. Because of its land-grant system and its innovative private sector, the U.S. agricultural system could unleash its full productive potential by such a strategy. It could increase its competitive advantage in grains and oil seeds and improve its position in animal products.

A war of subsidies against a competitor like the European Community would be costly and damaging to economic progress in both continents. In addition, the Europeans have a David-Goliath complex with respect to the United States. Nothing unifies the usually warring European politicians more effectively than the suggestion that Goliath, in the form of the U.S. Government, is hurling subsidies at them.

In contrast, if the United States threw down the gauntlet by unleashing the productivity of its farmers, and at the same time opened up its markets to European or other farmers who could compete on an equal footing, it would force the Europeans and others to reevaluate protectionist policies.

The approach would not be painless. It would take some time for other nations to learn the lesson of untrammeled competition. However, unless the United States takes the initiative and sticks resolutely to its strategy of unleashing the productivity of its farmers, the world is going to stagger on through a growing thicket of costly and counterproductive policies.

This does not mean that the United States would never interfere in trade. Its Government would need to retain the right to take selective action against blatant abuses by other countries. In the real world, there will always be some countries who will persist in ignoring the rule of law unless sanctions can be applied.

Desirable government export programs

Government export programs would need to be adapted to complement the strategy of freeing farmers to compete. Too often, the politicization of international trade has distracted attention from the main ingredients of successful competition. Fairly simply stated these include price and quality, and delivery of the product at the right time, in the right form and at the right place.

Efficiency is the key to achieving price competitiveness. Changes in technology continually alter the relevant level. Those changes may emerge from work in any part of the globe. Thus, strenthening the USDA's international intelligence network for data gathering, analysis and dissemination is absolutely crucial.

Quality in all its many facets is of vital importance to an increasingly more affluent and discriminating international market. Grades and standards designed decades ago for internal use in the United States need to be completely revamped for the international markets of today. For example, we have little knowledge of what our different grades imply when interpreted by foreign buyers. How do words like "premium," "choice," "No. 1," "fancy," "A-grade," and so forth, translate in other languages and cultures? What is the outcome, if these grades are not interpreted uniformly by all U.S. suppliers? What is the impact of the predominance of external characteristics in existing grades when internal characteristics are becoming more important as products transverse greater distances and are stored for longer times?

Finally, unlike countries with centralized marketing boards, the United States can only achieve quality standards by much consensus and self-regulation. Thus, industry awareness of the need for tighter standards and support for their execution is critical. Here again, tapping the potential for computerized electronic nondestructive tests of quality would give the United States a considerable advantage over its less technologically advanced rivals. In too many instances, we have repeated in agriculture the same sins as in steel, televisions and automobiles by allowing less well-endowed competitors to overtake us by sheer ingenuity and persistence and an emphasis on price and quality competitiveness.

The role of the dollar

The recent strength of the dollar has been blamed for a lot of agriculture's woes in international trade, and so there is much soul-searching about what U.S. agriculture's policy toward the dollar exchange rate should be. The issue can be put in perspective if we recall the ingredients of successful competition discussed in the last section. The value of the dollar only affects one of these, price. Many sales will still depend on product quality and on the package of services available to customers. U.S. farmers will be less vulnerable to price competition and the gyrations of the dollar if they work to maintain a distinct advantage over competitors in quality and marketing services.

Since the dollar was permitted to float against other currencies in 1971, it has on average been falling in relative value more often than it has been rising, and we can expect continuing fluctuations over the next decade.

Many argue that high Federal deficits and high real interest rates are the main causes for the strength of the dollar and that our export problems would be solved if Federal deficits were brought under control. However, an exchange rate implies a relationship between two currencies. In many, many cases since 1980 the dollar has become relatively stronger against another currency because the economy of the issuing country has become so weak. The causes of such weaknesses are well documented, including severe debt crises, political, military and climatic crises, a general loss of confidence in those economies and the relative attractiveness of the United States as an investment haven because of its political and economic stability and its favorable treatment of capital.

Any effort by agriculture to precipitate a decline in the value of the dollar could be both difficult and perilous in terms of possible ramifications throughout the world economy. On the other hand, improving product quality and marketing services is within the control of agriculture and would be beneficial regardless of the relative value of the dollar.

The real international financial question is how to strengthen the economies of many of agriculture's best customers. Many of these lack capital, skilled workers, and unique natural resources. Many have supported policies which have impeded savings, investment, and productivity growth. Certain programs such as Public Law 480 might be tailored to specific needs of these economies, but in general, the help they need is above and beyond what can be encompassed through U.S. agricultural policy. Many of these countries argue that the greatest aid the United States can give them is free access to its markets.

Conclusion

The underlying competitive realities of world agriculture will continue to make life difficult for farmers who do not improve their efficiency by adopting new and improved techniques and management processes. U.S. farmers, in general, are well positioned to exploit their rich natural resources, large size, flexible management, and tremendous reserve of USDA and land-grant research and extension to carve out a bigger share of the world market.

However, to achieve this we must terminate policies which discourage efficient use of resources, end the subsidization of inefficient farmers and encourage the transfer of marginal farmers to more productive endeavors. The United States needs to set the example in its commitment to free trade, not just in grains where it has a comparative advantage but also in dairy products where it may not.

If the decision to go all out for free trade is taken, then the major role of Government in exports would be to provide the marketing intelligence, analysis, and technical assistance needed to facilitate effective, flexible exporting.

U.S. FOOD AND FIBER—ABUNDANCE OR AUSTERITY?

(By Kenneth R. Farrell, Fred H. Sanderson, and Trang T. Vo)

If future needs for U.S. food and fiber were limited to the domestic market, few would be concerned about physically meeting those needs well into the next century. With the U.S. population growth rate expected to decline to perhaps 0.5 percent annually by 2000 and the likelihood of only small increases in per capita demand from higher real incomes, total domestic demand for food and fiber will be increasing less than 1 percent per year by 2000 and perhaps even more slowly thereafter. In such a closed economy, the major issues would be growth in productive capacity, dealing with low agricultural incomes, and the resource and human adjustment problems raised by slow growth.

But a closed economy is a fiction. The agricultural products of 2 in every 5 acres of harvested U.S. cropland are exported. International interdependence in agricultural markets is pervasive and reinforced by the increasing mobility of knowledge, technology, human and capital resources, and a wide range of goods and services. As the world's largest producer of food and fiber, a major recipient of those products in world trade, and a wellspring of agricultural technology, the United States is inextricably involved in a widening web of global interdependence.

By the year 2000, world population is projected to increase by 1.7 billion persons to 6.1 billion—a jump of nearly 40 percent relative to 1980—with more than 90 percent of that growth in the least-developed regions of the world. The projected average annual increase of 87 million persons is the equivalent of adding a Bangladesh each year for the next 20. The importance of such an increase to world food supplies is difficult to overstate. The world produced 1.57 billion metric tons of cereal grains in 1980, 270 million metric tons of it in the United States. To provide the same amount of grain per person to the 1.7 billion additional consumers in 2000 would require an additional 650 million metric tons—more than twice the U.S. average production of 1979–81. If per capita economic growth of recent decades in the developing countries is extended into the 21st century, global demand for food could be much higher, perhaps doubling current levels by 2020.

Much of the future growth in world production must come from the countries where population growth occurs. Even so, expanded world trade will be needed in such products as feedgrains and oilseed, which the United States produces in abundance and with comparative economic advantage relative to many countries. Total demand for U.S. food and fiber could expand substantially, with important consequences for domestic consumers as well as for producers and related institutions.

Beyond the physical and economic capacity of the United States to meet prospective demand, long-term issues and uncertainties will affect the supply and quality of natural resources, including the natural environment, on which agricultural and other biological systems ultimately depend. Even at current levels of agricultural production, there is disquieting evidence of soil erosion, water pollution, and declining water tables, and of chemical hazards in the environment and in the food chain in the United States and other countries. And in the long run looms the possibility of global climate changes, with unknown but likely uneven effects on agriculture and the natural environment.

FOOD AND FIBER PROJECTIONS TO 2000 AND BEYOND

Surveying the globe

World output of goods and services tripled in real terms between 1955 and 1980. Population rose from 2.8 to 4.4 billion, but per capita income doubled.

Agricultural production and trade grew with economic development. Worldwide, agricultural output rose at 3.1 percent per year in the 1950's, 2.6 percent in the 1960's, and 2.2 percent in the 1970's. The growth was broadly shared among developed and developing countries, with the latter enjoying higher rates of growth than the former. By 1980, world agricultural production, excluding China's, had nearly doubled the levels of the early 1950's. World agricultural trade grew at 3 percent per year in the 1960's and 4.3 percent in the 1970's. Undergirding that growth were forces of sustained economic development that expanded and altered the composition of demand, stimulated international trade, and induced structural changes in agriculture. Massive foreign investments improved the infrastructure of agricultural production systems and the development of natural resources, particularly water resources for irrigation. Human capital was enhanced through education. Real expenditures for agricultural research more than doubled, yielding myriad productivity-enhancing technologies.

Not all countries and people shared equally in the benefits of these impressive gains. The 2.1-percent annual population growth in the low-income developing countries from 1955 to 1980 left little room for improvement of per capita incomes and food supplies for millions of people. In Africa, particularly Sub-Saharan Africa, even the 2.7-percent growth in total food output in the 1960's provided only slight increases in per capita output; in the 1970's, per capita production fell precipitously by an average of more than 1 percent per year from already low levels. In South Asia, where population increased by 527 million between 1960 and 1980, the food-to-population balance improved slightly from its razor-thin position at the beginning of the 1960's. Even in those developing countries able to augment per capita supplies by imports, millions remained undernourished.

Global economic conditions once again have changed. Economic growth in the industrial countries slowed to 1 percent in 1981 and in 1982 was a negative 0.2 percent. In the high-income, oil-exporting nations and in Latin America and the Caribbean, growth declined even more sharply. World agricultural output has been maintained at relatively high levels in the 1980's, but international grain trade has declined since 1981.

The United States

The U.S. economy began strengthening in 1983, but for the industrial countries as a whole, growth is and will be modest in the immediate future, with relatively high levels of unemployment. Near-term recovery prospects are tenuous in many of the developing countries because of the combined effects of declining export earnings, severe problems in servicing external debts incurred under inflationary expectations of the 1970's, and stringent deflationary policies that have reduced imports and slowed economic growth.

The three decades of global economic development provided major impetus to the growth of U.S. agriculture. Output expanded by nearly 70 percent and the United States became a dominant supplier of coarse grains (mostly corn and sorghum), wheat, and oilseed in world trade and an increasingly important balance wheel of the world food system.

Less well organized is the fact that the United States now is the second largest importer of agricultural commodities, mainly from the developing countries of Latin America, Asia, and Africa. The nominal value of these imports, two-thirds of which compete directly with domestically produced products, quadrupled to $17 billion between 1950 and 1980—a 28-percent increase in real terms.

Although the domestic market still is the primary outlet for U.S. agricultural products, the sector clearly has become increasingly trade oriented. The growth in U.S. trade has been highly and positively correlated with world economic development. For the remainder of the century and beyond, the pace and pattern of global population, economic, and agricultural development will be crucial to U.S. agriculture.

World population

Changes in regional and world population constitute the fundamental and most important force likely to increase the demand for U.S. commodities. Rapid population growth means larger potential markets for exports, but it also may diminish growth in living standards and dampen demand.

With only one exception, every region in the world where 1970's population growth rates exceeded 1 percent is experiencing declining rates today and expects much slower growth by the end of the century (table 1). The exception is Sub-Saharan Africa, where growth rates are expected to increase through the 1980's before beginning to slow in the late 1990's.

Declining growth rates notwithstanding, the global prospect is for swelling economic pressure from population. As noted at the outset, the increase expected over the last two decades of the centu-

TABLE 1.—HISTORIC AND PROJECTED POPULATION, ABSOLUTE CHANGE, AND ANNUAL GROWTH RATE

Region	1980	1980–90		1990–95		1995–2000		2000
	Population (millions)	Absolute change (millions)	Rate of growth (%)	Absolute change (millions)	Rate of growth (%)	Absolute change (millions)	Rate of growth (%)	Population (millions)
North Africa–Middle East	243	70	2.56	35	2.12	40	2.22	388
Sub-Saharan Africa	387	141	3.16	95	3.37	105	3.15	727
European Community	270	7	0.26	5	0.34	4	0.30	286
Other Western Europe	79	5	0.62	2	0.54	2	0.46	88
USSR	265	26	0.94	11	0.73	10	0.63	312
Eastern Europe	135	9	0.65	4	0.56	4	0.54	152
South Asia	874	216	2.24	112	1.97	112	1.80	1,315
East Asia	459	87	1.75	45	1.59	45	1.47	635
Asia, centrally planned economies	1,075	161	1.41	82	1.30	80	1.18	1,398
Oceania	23	3	1.23	1	1.10	1	0.99	28
Latin America	359	90	2.26	48	2.03	47	1.83	544
North America	252	20	0.73	8	0.60	7	0.50	287
Total world	4,421	835	1.75	448	1.65	457	1.55	6,160

Source: World Bank.

ry is enormous—an average of 87 million persons per year. Furthermore, the distribution of the growing population is critical. Some 93 percent of the growth during the coming two decades will be in the world's six least developed regions, with more than 25 percent in South Asia alone and 20 percent in Sub-Saharan Africa. By 2000, only 19 percent of the world's people will live in the six most developed regions, down from 23 percent in 1980

Economic growth

Important as are the implications of population growth and its distribution, most of the developing countries have the potential for rapid, sustained economic growth. Many did grow rapidly during the 1970's, a pattern interrupted by the worldwide recession, which has had an inordinate impact on developing countries.

We have assumed that during the next two decades real economic growth will average well below the rates of the 1970's. The recession of the early 1980's and the impact of policies implemented by both developed and developing countries to constrain inflation will result in comparatively slow economic growth through the rest of the 1980's and into the 1990's (table 2). We assume growth rates will pick up during the 1990's and, by the end of the century, possibly exceed the average rate of the 1970's.

TABLE 2.—HISTORIC AND PROJECTED AVERAGE ANNUAL RATES OF REAL GNP GROWTH (PERCENT)

Region	1970–80	1980–2000
North Africa-Middle East	5.6	3.9
Sub-Saharan Africa	3.1	2.6–3.2
European Economic Community	2.9	2.5
Other Western Europe	3.3	3.0
U.S.S.R	4.8	3.3
Eastern Europe	4.6	3.1
South Asia	3.3	3.6
East Asia	7.8	5.6
Asia, centrally planned economies	6.0	4.2
Oceania	4.2	3.6
Latin America	5.9	4.1
North America	3.6	3.4
Total world	4.3	3.5

Source: Historic data from the World Bank, U.S. Department of Agriculture, and other sources.

In general, we see the most difficult problem facing the developing nations as balancing their needs for economic growth and for more jobs for a rapidly growing labor force against the need to reduce large debts and high inflation rates.

In each region, economic growth and population growth are closely intertwined. We project that, for example, by 1990, Sub-Saharan Africa and the EEC will have similar rates of real economic growth, with the rate in Sub-Saharan Africa slightly higher (table 3). However, the population growth rate there is so high and the EEC rate so low that the per-capita-income growth rates differ greatly. The EEC economy will grow a moderate 2.2 percent per capita per year, while we see economic growth in Sub-Saharan Africa declining by 0.5 percent annually through 1990.

TABLE 3.—HISTORIC AND PROJECTED TOTAL PER CAPITA ECONOMIC GROWTH RATES

Region	Economic growth rates (%)							
	1985		1990		1995		2000	
	Total	Per capita	Total	Per capita	Total	Per capita	Total	Per capita
North Africa–Middle East	4.17	1.5	3.99	1.5	3.62	1.5	3.72	1.5
Sub-Saharan Africa	2.57	−0.5	2.72	−0.5	3.37	0	3.15	0
European Economic Communities	2.41	2.2	2.50	2.2	2.54	2.2	2.50	2.2
Other Western Europe	3.57	2.5	3.07	2.5	3.04	2.5	2.96	2.5
USSR	3.49	2.5	3.38	2.5	3.23	2.5	3.13	2.5
Eastern Europe	3.21	2.5	3.11	2.5	3.16	2.5	3.04	2.5
South Asia	3.83	1.5	3.64	1.5	3.47	1.5	3.30	1.5
East Asia	5.81	4.0	5.70	4.0	4.59	3.0	4.47	3.0
Asia, centrally planned economies	4.32	2.9	4.80	2.9	4.20	2.9	4.08	2.9
Oceania	3.71	2.5	3.68	2.5	3.60	2.5	3.49	2.5
Latin America	4.64	2.3	4.50	2.3	4.33	2.3	4.13	2.3
North America	3.50	2.7	3.43	2.7	3.30	2.7	3.20	2.7

Source: World Bank.

FOOD AND AGRICULTURAL POLICIES

Governments actively intervene in agriculture in most countries. The centrally planned economies and many developing countries long have attempted to maintain stable and low food prices, while few have had policies of relatively high producer prices. Most industrial countries have had complex structures of producer price incentives, and some—notably the EEC—also have held consumer prices relatively high. Both types of structures have proved increasingly costly and cumbersome and are in the process of change.

The consequences have depended on the policy structure. Where food prices and producer prices have been held low, consumption tends to outpace production, requiring costly commodity imports. Where food prices are kept low and producer prices relatively high, consumption and production increase, but the subsidy becomes an ever-heavier budget burden. Where producer incentives are held very high, and especially where consumer prices are high as well, production has far outpaced consumption and surplus disposal has become extremely expensive.

The implications of these developments in food and agricultural policies are twofold. First, they demonstrate the power of economic incentives for both production and consumption. The sharp increases in national production correlate nearly perfectly with patterns of incentives, and the implication for both centrally planned and developing countries—where production lags behind policy objectives—is clear. Second, these trends portend a rationalization of the price and incentive policies worldwide. In spite of the fact that production incentives invariably develop a political momentum that is difficult to counter, the very large costs of incentive structures unrelated to domestic or world markets are difficult to justify and likely to become intolerable over the longer run. The implications of this rationalization are not now well understood, either for the countries themselves or the global food system, and need more scrutiny.

While the agricultural production and food consumption and trade of individual countries are, of course, markedly influenced by the sectoral and macroeconomic policies these countries individually pursue, their cumulative effects also influence the global foodstuffs balance and the prevailing patterns of world trade. Moreover, some countries and regions are individually so important to the global food system that a major shift in their policies could alter the entire system.

Projected global demand

The effects of economic changes on food and fiber consumption are extremely complex. Generally, food consumption increases with income to a point where consumer needs become satiated. As incomes increase, consumers first attempt to meet their caloric needs, then to increase the variety and quality of their diets, usually by substituting animal protein for carbohydrates—more meat, eggs, and dairy products and fewer grain-based foods. Table 4 shows the general dimensions of the change in world diets we expect to result from projected patterns of economic growth and food availability. For the last two decades of the century, we project average annual increases in per capita meat consumption smaller than during the 1970's, along with a continued decline in per capita milk consumption. The combination of substituting animal products for food grains and increasing feed use of cereals almost is offsetting, and results in per capita cereal consumption only slightly above the level of 1978–80. Oilseed consumption likely will continue to increase, but not as rapidly as during the 1970's. The increases in aggregate demand are, nevertheless, very large once population growth is taken into account. We project world demand for meat to increase by 89 million tons, or 64 percent; for milk, by 168 million tons, or 36 percent; for grains, by 722 million tons, or 46 percent; for oilseed, by 95 million tons, or 62 percent (figure 1). The largest percentage increases tend to be in the developing world. The larger demand for livestock products will contribute significantly to the growth of aggregate demand for cereals and oilseed, over and above the increased demand for grains and oils for direct human consumption tied to the population increase. We project global consumption of natural fibers to grow 37 percent by 2000, or about 1.5 percent annually. Consumption of cotton, as a result of somewhat less intense competition from synthetic fibers, is projected to increase 1.85 percent annually to 2000.

TABLE 4.—HISTORIC AND PROJECTED WORLD PER CAPITA CONSUMPTION

[In kilograms per capita]

Commodity	1969–71	1978–80	Annual change (percent)	2000	Annual change (percent)
Meat	28.3	31.8	1.3	36.8	0.7
Milk	108.0	107.1	−0.1	102.7	−0.2
Cereal grains	334.7	361.1	0.8	371.7	0.1
Oilseed	29.7	35.5	2.0	40.5	0.6
Fiber	5.3	5.0	−0.6	4.9	−0.1

Source: Historic data from the UN Food and Agriculture Organization.

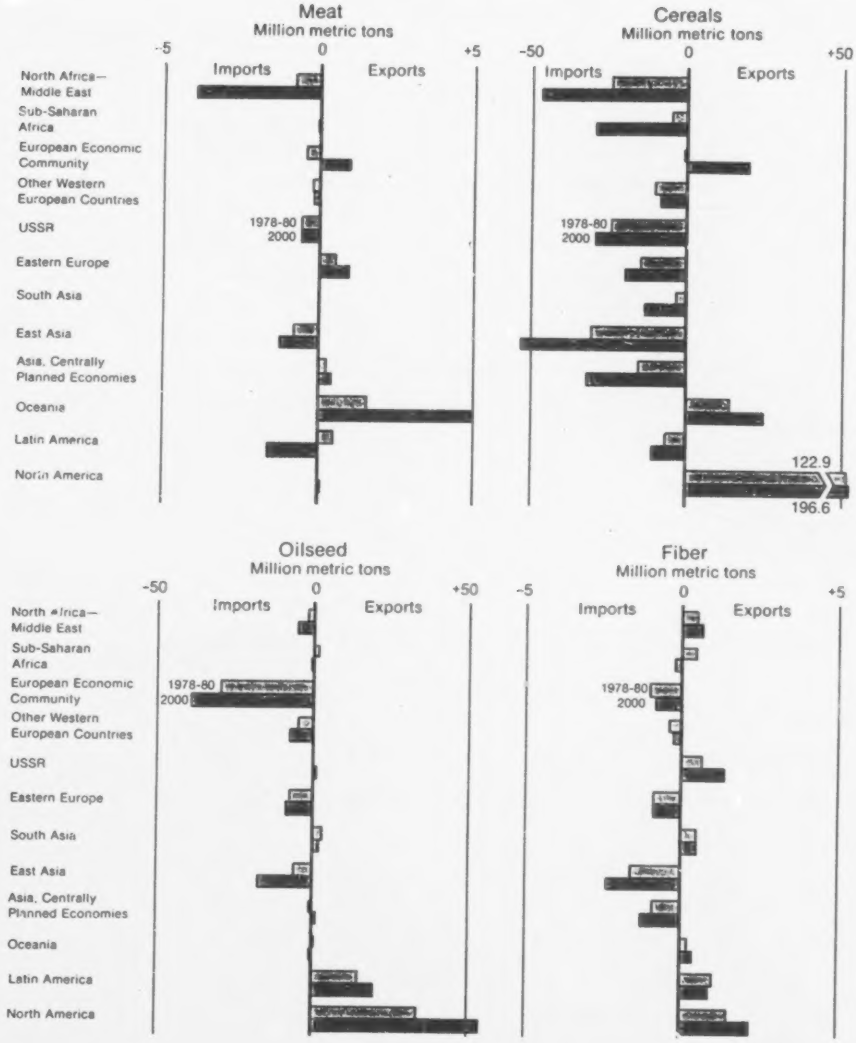

Figure 1. Projected world trade for meat, cereals, oilseed, and fiber. Plus signs (+) indicate exports and minus (−) indicate imports.

Global production

Detailed examination of land and water resources and of the possibilities of raising yields by increased applications of inputs and technology suggests that all regions will meet increased demand largely out of domestic production. While the rates of growth of demand are particularly high in some of the developing regions, these generally also are the regions where production technology has been lagging and the potential for productivity growth is, therefore, relatively large. Realizing this potential will require massive investments in land improvement, irrigation, research, and extension; adequate inputs of fertilizer, pesticides, and improved seeds; improved marketing and storage facilities; and adequate economic incentives.

The projections presented here represent our judgment of what is likely to happen under present or modified policies. They take into account considerations of comparative advantage and consumer welfare that favor increased trade, but also foreign exchange constraints and self-sufficiency and farm income objectives that may work in the opposite direction.

Cereals.—Accounting for about three-fourths of the world's crop area and production, cereals clearly are the most important commodity group. The 1.8 percent projected annual rate of increase in production is significantly less than the 2.6-percent annual growth experienced in the 1970's (table 5). Most of the increase in production will come from improved technology rather than additional land, as has been the case for the last several decades; indeed, we expect area expansion to contribute only 15 percent of the production growth, compared to 25 percent in the 1970's. In absolute magnitude, harvested grain area, which increased by 46 million hectares in the 1970's, is projected to increase by another 40 million hectares in 1980-2000. [One hectare (ha) equals 2.47 acres.]

Oilseed.—The 1970's brought a sharp increase in oilseed production as nations attempted to improve food quality and the efficiency of animal production. In 1969-71, nearly 113 million ha were used to produce oilseed—about 17 percent of the area devoted to cereals. By the end of the decade, the share increased to 21 percent. Nine-tenths of the increase was in soybeans, mainly in North and Latin America.

The annual rate of growth of world oilseed production projected for 1980-2000 (2.1 percent) is only half that experienced in the 1970's (table 6). For North America, the projections call for 1.8 percent annual growth, only one-third of that in the 1970's; for Latin America, 1.9 percent, down from 11.3 percent in the 1970's.

TABLE 5.—RATES OF GROWTH OF CEREAL GRAIN PRODUCTION

[Percent per year]

Region	Area		Yield		Production	
	1969–71 to 1979–81	1979–81 to 2000	1969–71 to 1979–81	1979–81 to 2000	1969–71 to 1979–81	1979–81 to 2000
North Africa–Middle East	0.06	0.18	2.04	2.17	2.10	2.35
Sub-Saharan Africa	1.17	0.70	0.93	1.00	2.10	1.70
European Economic Community	−0.09	−0.14	2.39	1.26	2.30	1.12
Other Western Europe	−0.17	−0.10	1.76	2.56	1.58	2.46
USSR	0.53	0.05	−0.20	2.26	0.33	2.31
Eastern Europe	−0.43	0.08	2.75	1.08	2.31	1.16
South Asia	0.42	0.14	1.94	1.97	2.37	2.11
East Asia	1.12	1.28	1.47	1.21	2.60	2.51
Asia, centrally planned economies	0.21	−0.22	3.44	1.85	3.65	1.63
Oceania	3.20	2.10	0.78	1.16	4.00	3.29
Latin America	0.73	0.49	2.18	1.98	2.92	2.48
North America	1.75	0.24	1.71	1.11	3.50	1.35
Total world	0.65	0.27	1.94	1.56	2.60	1.83

Source: Historic data from the UN Food and Agriculture Organization.

TABLE 6.—RATES OF GROWTH OF OILSEED PRODUCTION

[Percent per year]

Region	Area: 1969–71 to 1979–81	Area: 1979–81 to 2000	Yield: 1969–71 to 1979–81	Yield: 1979–81 to 2000	Production: 1969–71 to 1979–81	Production: 1979–81 to 2000
North Africa–Middle East	−0.50	1.23	1.84	0.18	1.33	1.41
Sub-Saharan Africa	−0.99	−0.47	−0.05	0.70	−1.04	0.22
European Economic Community	4.04	2.35	2.74	0.91	6.89	3.28
Other Western Europe	9.06	1.69	−1.91	2.56	6.98	4.30
USSR	−0.25	0.30	0.74	2.66	0.49	2.97
Eastern Europe	2.37	2.56	1.14	1.26	3.53	3.85
South Asia	0.63	0.43	0.39	1.19	1.02	1.63
East Asia	1.07	0.69	1.46	2.47	2.54	3.18
Asia, centrally planned economies	1.23	1.64	1.30	1.38	2.54	3.04
Oceania	7.53	1.08	2.34	1.37	10.04	2.47
Latin America	6.95	1.00	4.02	0.90	11.26	1.91
North America	4.18	0.69	1.33	1.08	5.57	1.79
Total world	2.21	0.80	2.02	1.33	4.27	2.13

Source: Historic data from the UN Food and Agriculture Organization.

As with cereals, most of the increase will come from increased yields. This contrasts sharply with the 1970's, when area expansion contributed more than half of the increase in production.

World trade projections

World trade in commodities depends not only on consumption needs not satisfied by domestic production, but also on economic and trade policies, and on the financial and foreign exchange position of each nation.

In the short run, trade policies frequently are determined less by comparative advantage in production than by balance of payment constraints, self-sufficiency considerations, or farm income objectives. Many nations tightly control prices of agricultural products, holding them at target levels by import quotas, variable fees and levies, or directly administered prices.

Although such policies are vitally important to world trade and changes are difficult to anticipate, the prospect by and large is for policy structures similar to those currently in place, except for slight modifications in some regions where forces for change are building. These are primarily the EEC, U.S.S.R., China, and Sub-Saharan Africa. We project that the world will depend more on trade by 2000, and assume implicitly that current protectionist pressures will abate as economic growth resumes.

National financial conditions are major considerations in world trade projections. Two diverse impacts arise from the heavy debt burdens and weak financial situations that now exist in many developing nations, primarily in Latin America, but also in Africa and Asia, and in Eastern Europe. The first is that the stronger dollar has made both oil and U.S. commodities more expensive to purchase and thereby tends to reduce many importers' ability to import these products while enhancing U.S. competitors' positions. The second is the pressure such conditions place on developing nations to increase exports, even when world markets are depressed and it is uneconomical for them to do so, thus further increasing competition with U.S. exports.

We expect the current difficult financial conditions for the Third World to continue through the mid-1980's at least (and longer for the most debt-ridden countries), but to improve steadily through the 1990's. The increases in per capita food consumption projected for the end of the century—modest as they are—depend heavily on world trade. Cereal consumption is expected to exceed production in 10 of the 12 regions by 2000, and meat consumption in 5 to 12.

Projected trade volumes in major commodities derived from the preceding consumption and production projections are presented in figure 1.

—For *Meat,* the aggregate volume of regional net imports is projected to triple, from 2.6 million metric tons in 1978–80 to 7.4 million in 2000.

—Trade in *dairy products,* as measured by aggregate regional net imports, is projected to increase by 60 percent, from 15.7 million metric tons (milk equivalent) in 1978–80 to 26 million in 2000.

—Trade in *cereals* is projected to almost double, with aggregate regional net imports rising from 131 million metric tons in

1978–80 to 242 million by the end of the century. This, however, represents a much slower rate of growth than that experienced in the 1970's.

—For *oilseed*, the aggregate volume of net regional imports is projected to increase by 52 percent, from 51 million metric tons in 1978–80 to 78 million in 2000. This again, represents a much slower rate of growth than prevailed in the 1970's.

—World trade in *natural fibers*, as measured by regional net imports, is projected to grow by 25 percent, from 4.8 million metric tons in 1978–80 to 6 million in 2000, also a slower rate of growth than in the 1970's.

Some major uncertainties

All projections, including ours, are at the mercy of uncertainties at every step in the analysis, with changes in public policies undoubtedly the most important sources of uncertainty. For example, an EEC policy in which food production, consumption, and trade were geared to world prices could swing the region from being a net exporter of cereal grains to being, as we project, a net importer of those products by 2000. The difference could be as much as 20 to 30 million metric tons. Similarly a reorganization of Soviet agriculture could have major effects on the global food system. And other uncertainties should be noted, as follows.

Population growth.—For many years following World War II, future population growth tended to be underestimated, mainly because forecasters did not fully foresee the effects of progress in medicine and sanitation in reducing mortality in the developing world. More recently, the tendency has been to overestimate growth because of a lag in recognizing the decline in fertility rates in the wake of urbanization and industrialization; more widespread education and family planning programs; and the gradual enhancement of the social status of women. Even small downward revisions of population growth rates can have significant effects on food projections.[1]

Income growth.—Assumptions about future economic growth are critical. Accordingly, we estimated changes in the demand for meat, milk, cereals, and oilseed, and in the corresponding trade levels to 2000 resulting from "high" and "low" growth rates. Even though the alternative growth rates differ, in general, by only one-half of a percentage point from those used in the baseline projections, the resulting world demand estimates for meat for the year 2000 vary from minus 7.6 percent to plus 8.6 percent around the baseline estimates. For the other, less income sensitive commodities, the differences are smaller. The effects on trade are even more significant: the high-income growth variant raises the aggregate regional net meat imports by 42 percent; the low variant reduces it by 29 percent.

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[1] Population projections are still controversial. The lastest medium variant projections by the United Nations (1980) show a somewhat more rapid decline in world population growth rates than the World Bank projections used here, from 1.72 percent in 1980 to 1.5 percent in 2000, mainly because of a sharp downward revision for China. Although the U.N. growth rate is only 0.05 percentage points lower, it yields a world population that is 65 million (or 1 percent) smaller than the World Bank projection for 2000.

Income elasticities.—As in the case of population, analysts often have to work with outdated income-consumption relationships and thus are slow to incorporate changes that already have taken place, let alone changes that might occur in the future. Moreover, past income growth may have delayed future effects because it may take years—even a generation—for national diets to adjust to higher levels of affluence.

Income elasticities also are affected by changes in income distribution, which are not considered here. Poor people spend a higher proportion of any additional income on staple foods than their more affluent compatriots. Consequently, the average income elasticity of demand for foodgrains would be significantly higher in South Asia, say, should the income distribution become more equal.

Competitive factors affecting trade patterns.—Trade patterns are highly sensitive to changes in competitive conditions. The United States has a substantial comparative advantage in grain and soybean production, but other countries, including Canada, Australia, Argentina, and Brazil, have become major competitors. The United States is not now a significant exporter of livestock products and is not likely to become one, but competitive conditions could become more favorable. A great deal of uncertainty exists about the extent to which importing countries will satisfy the increased demand for livestock products by importing meat and dairy products or by developing their own livestock industries, based on imported feedstuffs.

Projected demand for U.S. food and fiber

Since the late 1960's, the U.S. policy for grain, oilseed, and cotton has been geared to the world market: As domestic demand leveled off, production responded primarily to trends and fluctuations in export demand (table 7). The sharp rise in export volume in the 1970's was attained by increasing acreage and yields, without lasting effects on real prices. By comparison, growth in both domestic and export demand for U.S. products is likely to be more moderate in the next two decades, particularly in the 1980's.

TABLE 7.—HISTORIC AND PROJECTED GLOBAL DEMAND FOR U.S. AGRICULTURAL PRODUCTS
[In millions of metric tons]

Commodity	1969–71			1979–81			2000		Total		
	Domestic	Net trade	Total	Domestic	Net trade	Total	Domestic	Net trade	Baseline	High	Low
Cereals[a]	171.0	39.0	210.0	192.7	109.6	302.3	227.0	168.2	395.3	405.3	378.6
Oilseeds[b]	20.2	17.0	37.2	31.5	33.3	64.8	38.1	53.9	92.0	92.9	91.0
Meat	21.9	.6	21.3	24.5	0	24.5	29.2	0.1	29.3	30.6	28.4
Milk	53.4	−.2	53.2	59.0	−0.8	58.2	71.1	−0.9	70.2	70.8	70.2
Cotton	1.71	0.51	2.22	1.47	1.54	3.01	1.42	2.20	3.62	3.70	3.6

[a] Includes food, feed, seed, industrial use and waste.

[b] Includes oilseed trade, in oilseed equivalent.

Projected total demand for cereals is 31 percent greater in 2000 than the 1979–81 average; that for oilseeds about 42 percent greater; and for meat, milk, and cotton about 20 percent greater than in 1979–81. The implied annual growth rates, in the range of 0.9 to 1.6 percent, all are well below those of the 1970's. Under alternative economic growth rates, cereal demand might range between 379 and 405 million metric tons (a 24- to 35-percent increase relative to 1979–81), and demand for oilseed might range between 41 and 44 percent above 1979–81.

If realized, these projections will reinforce the trend of increased dependence on foreign markets. By 2000, close to 60 percent of the total consumption of U.S. cotton and soybeans and 40 percent of consumption of U.S. cereals will be in foreign markets, while projected per capita domestic consumption by 2000 will be only 3 to 6 percent above 1979–81 levels.

Beyond 2000

World population probably will continue to increase through the first two decades of the 21st century to perhaps 7.8 billion, despite the projected decline in the growth rate—1.23 percent annually from 2000 to 2020 compared with 1.67 percent from 1980 to 2000. The significance of a nearly 3.5 billion increase in the next 40 years is difficult to assess from 1984's vantage point, but it clearly implies mounting pressure on resources and technologies to meet human needs for food and fiber.

Production of cereals required to meet projected 2020 consumption levels would be 90 percent above the 1979–81 world average production; that of oilseed and meat more than double (123 and 140 percent, respectively); and that of cotton is nearly two-thirds above the 1979–81 average. Although an increase in the cultivated land base (106 million ha) would be necessary from the current stock of unused arable land—estimated to range between 1.5 and 2.0 billion ha—most of the increased production probably would be derived from increased crop yields, because it is more economic. The projections suggest increases of 70 to 75 percent in global yields of cereals and oilseed would be needed by 2020 relative to 1979–81. Such an increase would equal an average annual yield increase of 1.3 to 1.4 percent over the 40 years. Increases of this magnitude on a sustained basis would be possible only with major new technological advances, expanded irrigation, double cropping, and other types of intensified production. An even greater reliance on world trade would be needed.

THE LONG-TERM PRODUCTIVE CAPACITY OF U.S. AGRICULTURE

What will it take to meet projected domestic and foreign demand in 2000 at real prices approximating those of recent years? Fortunately, no miracles are required; the implied production growth rates to 2000 are well below those of the 1970's (table 8), which suggests less pressure on the Nation's agricultural base than foreseen by some analysts in the 1970's. However, it should be noted that these growth rates are from the relatively high production levels and resource-use base of 1977–81, when land used for crops attained a record high 390 million acres, with average crop yields slightly above trend.

TABLE 8.—HISTORIC AND PROJECTED ANNUAL RATES OF GROWTH OF TOTAL PRODUCTION, UNITED STATES

[In percent]

Commodity	Growth rate	
	1969/71–1979/81	1979/81–2000
Cereals	3.7	1.3
Oilseed	5.7	1.6
Meat	1.4	.9
Milk	.9	.9
Cotton	3.1	.9

Agriculture's ability to meet projected demand depends on many uncertain variables, both technical and economic. The quantity and quality of resources combined with production technologies available through time define physically attainable productive capacities. These boundaries have expanded substantially in recent decades and may be expected to continue to do so as a result of technological advance. But the combination of resources and production methods that will be used to achieve any physical attainable output depends on economic relationships—the price relationships among production inputs, between those inputs and product prices, and among product prices themselves. Obviously, projecting such economic relationships several decades ahead is fraught with great uncertainty. Nevertheless, without attempting to project precise quantitative dimensions of future productive capacity and output, we do assess potential technological, economic, and natural resource developments that may affect the future rate of expansion of physical and economic capacity.

The future supply of natural resources and other production inputs.—The adequacy of the natural resource base to sustain continuing expansion of agricultural production came under intense scrutiny during the 1970's. And well it might: Take the case of the most basic natural resource—the land itself. High rates of growth in exports resulted in the return to production of some 60 million acres of cropland held in reserve under Government programs in the late 1960's. With the incentive of high commodity prices in the mid-1970's, expectations of continued expansion of export demand, and the ready availability of low-cost capital, planted cropland expanded to a record high 390 million acres in 1981. The emergence of large stocks of grain in 1981 and 1982 and the withdrawal of nearly 83 million acres from production in 1983 muted—but did not eliminate—public concern about the adequacy of the land base.

At the same time, mounting evidence of soil erosion, water pollution, and overdrafts in water use in some regions, combined with concern about the environmental impacts of agricultural chemicals raised serious questions about the long-run consequences of continued high rates of growth of "high-tech" agriculture. Some statistical evidence of a slowdown in agricultural productivity growth rates added to the worry.

Two major reports in the early 1980's—*Global 2000* and the *National Agricultural Lands Study*—further fueled public concern and debate.[2] *Global 2000,* incorporating and extending high 1970's rates of growth in export demand for U.S. farm products, foresaw a world with rising real costs of production, higher real prices of food and fiber, and increasingly serious environmental problems caused by soil erosion and agricultural chemicals. The *National Agricultural Lands Study,* also assuming high rates of growth in export demand, pointed to losses of prime agricultural cropland to urban and industrial uses and an eventual national "cropland crisis." In the late 1970's, Government policy decisions to slow public investments in developing water supplies, coupled with threats of further pollution and increasingly intense competition among urban, industrial, and agricultural uses of water in the Western United States, added further to what some foresaw as impending shortages and serious degradation of the Nation's natural resource base by the end of the 20th century, if not before.

These are serious fears and charges, and they deserve to be addressed seriously. At the outset, however, we should make clear that we do not accept a basic premise of this line of argument—that the world's resources are akin to a pie of a certain and fixed size that is doomed to be consumed at a more or less predictable rate.

The specter of impending crises in the availability of land and water resources arises in part from preoccupation with their physical limits. But the demand for and use of resource services from that physical stock are determined by human choice and powerfully influenced by social and economic criteria. Scarce resources are socially valuable resources. Economic scarcity of a resource induces an increased supply of technology to substitute for the scarcer, higher priced resource service. And as a resource becomes scarcer and more socially valuable, users conserve that resource by substituting other resources and by adopting resource-saving technologies and management practices. This principle of substitution is dramatically evident in the performance of U.S. agriculture in recent decades.

Several complex, sometimes countervailing, forces will shape the competition for natural resources into the 21st century. In an increasingly interdependent society, competition for natural resources doubtless will heighten. On the margin, the value of water and generally the value of land in nonagricultural uses exceeds its value in agriculture. Thus, where markets are operating unfettered and efficiently, agriculture in many locations in the 21st century will be in a weak competitive position for use of those resources, much as it is now. Somewhat related is the likelihood of continued erosion of the political power of agricultural interests at the national level and in many States. By the next century, agriculture policymakers will find it more and more difficult to obtain or even maintain "special-interest" policies for water, other resources, or, for that matter, agricultural commodities themselves.

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[2] President's Council on Environmental Quality, *Global 2000* (Washington, DC, CEQ, 1980); and U.S. Department of Agriculture and President's Council on Environmental Quality, *Final Report, National Agricultural Lands Study,* (Washington, DC, Government Printing Office, 1981).

The growth in nonagricultural demand for resources will be highly uneven, given projected demographic and economic growth patterns to the 21st century. Broadly, agriculture close to urban centers, and in Southwestern States in general, will experience the greatest—in some areas irresistable—competition from nonagricultural forces.

Agricultural land.— Economic pressure on the agricultural land base from nonagricultural demand probably will be lower in the next three decades than in the past three. Most important, U.S. population growth rates are diminishing. The dramatic migration from metro to nonmetro areas, prominent in the 1970's, may slow. The rate of household formation is likely to decline, beginning in the 1990's, because of the age composition of the population. Housing starts, retarded in the early 1980's because of high construction costs, high real interest rates, and recession, may increase in the late 1980's, but ultimately can be expected to slow because of declining rates for new airports, water and highway transport systems, dams, and reservoirs—all significant past claimants on cropland—already have slowed. There are, of course, important regional and local exceptions to such generalizations. In the Sunbelt States, for example, competition for land and water will intensify, posing critical choices among agricultural, urban, industrial, and other enterprises in the use of resources well before and into the 21st century.

Seen in the light of the principle of resource substitution and prospects for lesser growth in competition for land for nonagricultural uses, an impending "cropland crisis" seems less likely than was popularly depicted in the 1970's.

The national cropland base is estimated to be about 540 million acres—413 million acres of current cropland and 127 millon acres of pastureland, rangeland, forestland, and other land of "high" or "medium" potential for growing crops (figure 2). Although the annual net conversion of 875,000 acres of cropland in 1967–75 was highly dramatized, the cumulative conversions during those nine years constituted only slightly more than one-tenth of 1 percent of the cropland base. But preoccupation with a single, national level statistic can be misleading. Soil characteristics differ, and land in one area may not be a perfect substitute for land in another area in either a physical or economic sense. The cropland base is a valuable national asset that warrant prudent husbandry.

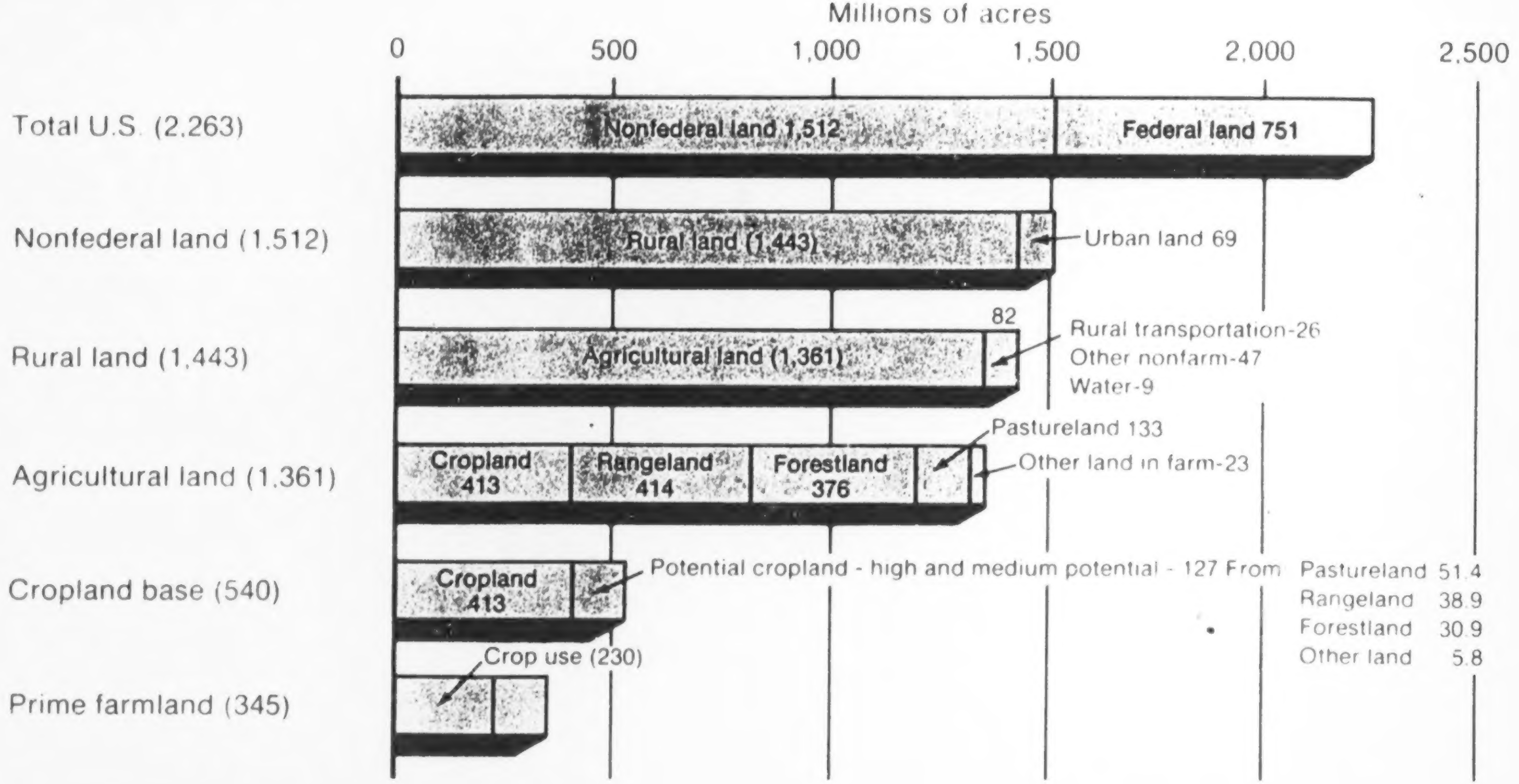

Figure 2. The agricultural land base of the United States. Note that the total includes 2 million acres classified as "nonagricultural" that were deemed potential cropland by the Soil Conservation Service. Source of data: U.S. Department of Agriculture and the President's Council on Environmental Quality, Final Report, National Agricultural Lands Study (Washington, D.C., Government Printing Office, 1981) p. 9.

Of the 127 million acres considered to have "high" and "medium" potential for conversion to cropland, about 50 million are in pasture and 70 million in rangeland. This land would be an obvious first choice for conversion, but it clearly would have negative effects on livestock production. Another 30 million acres of the potentially cultivable land are privately held forests. Putting that land under cultivation generally would cost more than converting pasture or rangeland, and it would marginally depress the production of forest products.

Growth in demand for food and fiber is likely to be expressed not only in demand for additional cropland, but also in more intensive uses of cropland already in production. Increased intensity could be achieved in several ways, among them greater use of inputs such as fertilizer, pesticides, labor, and water, shifts from lower to higher value crops, higher plant population per acre, and reduction in crop failure and summer fallow.

Double-cropping is another way to produce more from the same amount of land. According to Robert Boxley, 14 million acres were doubled-cropped in 1981—three and a half times the 1969 level.[3] Boxley points to several factors conducive to expanding double-cropping—faster-maturing plant varieties with shorter growing seasons, improved machinery and equipment, and minimum or no-till technology. He suggests that, by 1992, double-cropped acreage might be 22 million acres, with much of the increase occurring in the Delta and Southeastern States.

Expanding the land base and using it more intensely means capital investment, improved management, and increased use of other inputs. But it also means several types of social costs accruing over long periods but not incorporated immediately or fully into markets for resources or products—environmental degradation and loss of wildlife habitats, for example. Of the various environmental threats, soil erosion probably is the most significant, through its effects on water quality and potential productive losses on agriculture cropland. These effects, however, tend to be highly localized.[4] Regardless, the potential to exacerbate such environmental and productivity costs increases as the cropland base expands. The supply of cropland probably will not physically or economically limit U.S. food production by the beginning of the 21st century, but actions to preserve it and planning to regulate its use in environmentally acceptable ways at the local level are neither irrelevant nor unnecessary. Indeed, these issues and choices are likely to grow ever larger as the next century approaches.

Water resources. Most people are unaware of agriculture's tremendous thirst. In fact, however, agriculture accounts for 80 to 85 percent of the *total* amount of water consumed each year in the United States. Some other basic points:

Irrigated land in farms doubled between 1950 and 1978 to a total of nearly 51 million acres.

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[3] Robert Boxley, "The Supply of Cropland," Economic Research Service Report, U.S. Department of Agriculture.

[4] Pierre R. Crosson and Sterling Brubaker, *Resource and Environmental Effects of U.S. Agriculture* (Washington, DC, Resources for the Future, 1982).

> Some 93 million acre-feet of water—that is, 22 inches of water per irrigated acre—were used on this land, about 54 percent of it from surface watercourses and the rest from ground water aquifers.
>
> The Western United States, where more than one-half of the value of crops derives from irrigation, contains 86 percent of the Nation's irrigated acreage.
>
> Irrigated agriculture accounts for roughly one quarter of the Nation's crops and nearly one-seventh of the Nation's cropland.

Initially, when the West was settled, water was heavily subsidized by governments and treated almost as a free good by western agriculturalists. The original users not only were allowed to use water without charge, but also were granted water rights as long as what they used was put to "beneficial" use. Also, until recently, low energy prices coupled with Federal or State subsidies have helped to keep the costs of moving water low, and this has been important to developing groundwater supplies.

Accordingly to Kenneth Frederick, however, "The days of cheap water are ending in the West. In many areas, irrigators now depend on essentially nonrenewable water supplies. Current irrigation levels with average precipitation result in the mining of over 22 million acre-feet of water from western aquifers." [5]

In the United States as a whole, the average rate of ground water withdrawals has risen 3.8 percent per year since 1950, almost twice the rate of increase in the use of surface water; much of the increase was in the water-short areas of the West. Nationally, nearly one quarter of the ground water withdrawn is not replenished: the water table is declining an average of up to 6.6 feet per year under 15 million acres of land irrigated by ground water. From the Rio Grande to Nebraska, in Arizona and California, falling ground water levels and higher energy costs are boosting substantially the costs of ground water irrigation. Nor is surface water likely to pick up the slack, since the demands on the rivers and streams of the Nation's principal irrigated areas already commonly exceed available supplies. The availability and price of water and energy, rather than land, may be the critical natural resource variables for agriculture in the West in the years ahead. Public policy for water in the West is moving from developing additional supply to managing the increasingly more valuable current supply.

What seems likely to ensue over the next several decades is a series of marginal agricultural adjustments to higher priced water—more efficient water application, reduced rates of application, and shifts from lower to higher valued crops. The potential to conserve water in these ways is high.[6] However, the investment capital needed to achieve more efficient irrigation systems is substantial, running into several billions of dollars.[7]

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[5] Kenneth D. Frederick, with James C. Hanson, *Water for Western Agriculture* (Washington, DC, Resources for the Future, 1982).

[6] Peter Rogers, "Water Resource Technology and Management in the Future of U.S. Agriculture." Paper presented at the Soil and Water Resources Conservation Act (RCA) Symposium: Future Agricultural Technology and Resource Conservation, Washington, DC, December 1982, p. 8.

[7] Frederick, *Water for Western Agriculture*.

The physical requirements for water to meet projected urban and other nonagricultural uses in the West to the year 2000 are small relative to the total quantities now used in agriculture. Nevertheless, the water issue will force many difficult, controversial choices. One of the major challenges is to develop institutions to reduce distortions arising from policies predicated on an abundant, low-priced natural resource.

Beyond water's physical and economic dimensions lie major issues of water quality. Ground-water contamination from agricultural (as well as nonagricultural) sources is serious in many parts of the country, and western irrigation practices have increased ground-water salinity. As Frederick notes, "Perhaps one-quarter of the lands currently under irrigation in the West are heavily dependent on nonrenewable water supplies, and the productivity of several million additional acres is threatened by rising salt levels."[8] And pesticides and fertilizers may seep into ground water.

Other water quality problems—dissolved oxygen, suspended solids carrying bacteria, nutrients, pesticides, excessive phosphoric and nitrogenic nutrients—can be laid at agriculture's feet in part, and occasionally in major part. The 1972 Federal Water Pollution Control Act set forth ambitious goals to improve water quality. Progress has been made—scattered evidence suggests that some of the worst pollution problems may be abating—but much remains to be accomplished. Maintaining or improving water and environmental quality may require modifying agricultural production practices and ultimately may mean higher direct costs of agricultural production.

Other production factors

Capital.—As noted, the growth of U.S. agricultural productivity and total output in recent decades springs from the substitution of capital-embodied technologies for land and labor. Several factors were at work.

> Public and private investments in research and development made available a vast array of new or improved technologies, including labor-saving machinery and equipment, improved stocks of seeds, more effective inorganic fertilizers, a plethora of pesticides manufactured for specific control purposes, and scientifically blended, nutritionally balanced animal feeds.
>
> Institutions such as the agricultural extension services and extensive public and private communication and information systems helped to transfer newly developed technical information from scientist to farmer and assisted its adaptation to local use. Education and improved management skills and techniques speeded the transfer and adoption process.
>
> Fertilizer use increased from an average of 22 million tons in 1951–55 to more than 50 million tons currently, and pesticide application jumped from 194 million pounds in 1964 to nearly 480 million pounds in 1982.
>
> Direct energy use in agricultural production now approximates 2,000 trillion Btu's annually.

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[8] Ibid.

Capital requirements in agriculture for investment and operating purposes will grow substantially in the decades ahead and competition for capital for domestic and international development and for the financing of public debt may maintain real rates at levels well above those of recent decades. Nevertheless, capital availability and costs are not likely to seriously impair growth in U.S. agriculture in the longer run context of 2000 and beyond. Corporate business structures will become increasingly prevalent among the larger, more highly capitalized and biggest producing farms. And it seems plausible that a growing number of these corporations will be securing investment capital directly from equity markets by the end of the century.

Economic incentives.—In addition to technology and institutions to effect its transfer, powerful economic incentives reinforced the "technological revolution." Low real prices of petroleum and other energy supplies induced the substitution of mechanical power and fertilizer for higher priced labor and land. An expanding spectrum of more efficient pesticides offered opportunities for higher crop yields and lower per unit production costs. Between 1950 and 1978, the average value of land increased 650 percent and farm wage rates some 380 percent. But the price of gasoline increased only 150 percent and that of fertilizer about 84 percent—powerful incentives for resource substitution. And the competitive economic structure of agriculture provided an economic imperative for farmers to make widespread use of the technologies. The results are apparent in table 9. Total inputs in 1980-83 were all but identical to the average of 1950-59, but output averaged nearly 70 percent more. Total factor productivity—the ratio of total output to total input—was nearly two-thirds higher in 1980-83 than in 1950-59.

TABLE 9.—INDEXES OF FARM INPUT, OUTPUT, AND PRODUCTIVITY

Year	Total input	Total output	All inputs	Productivity	
				Labor	Land[1]
1950-59 (Av)	102	67	66	26	64
1960-69 (Av)	98	80	82	50	83
1970-79 (Av)	99	96	97	100	98
1980	103	103	100	112	99
1981	103	118	115	131	113
1982[2]	103	117	114	136	116

[1] Measured as crop production per acre.

[2] Preliminary.

Note: 1977=100.

Source: Economic Research Service, "Economic Indicators of the Farm Sector: Production and Efficiency Statistics," 1981, and miscellaneous reports.

Labor.—These technical changes greatly enhanced resource use efficiency in farming, expanded production and kept food and fiber prices low for domestic and foreign consumers, and freed resources from agriculture for producing goods and services elsewhere in the economy. Massive structural adjustments ensued. The number of farms fell from 5.6 million in 1950 to an estimated 2.4 million in 1982. Production became ever more concentrated, with 28 percent of the farms now accounting for 88 percent of product sales. Farm employment fell from 7.2 million in 1950 to 3.4 million in 1982. In the two decades between 1940 and 1960 a net of 21.5 million persons moved to the cities or to urban nonfarm residences—an average of more than 1 million persons every year.

The plunge in farm employment came as farm and nonfarm wage rates approached equilibrium and labor-saving production technologies came onstream. With labor now representing only 12 percent of all inputs used in farming and farm employment constituting only 3 percent of total U.S. employment, future absolute declines in employment and labor inputs obviously will slow compared to historic rates. However, assuming national economic growth and continuing advances in labor-saving technologies, much of the unskilled labor now in farming may well disappear by 2000. On the other hand, demand will grow for labor with highly technical skills to manage increasingly complex technology and production systems. Overall, however, farming will be a shrinking part of the national labor market, and the same is likely to be true in allied input and product marketing systems if automation and other labor-saving technologies advance as expected.

Input prices.—With respect to future prices of off-farm production inputs, that of energy is perhaps most uncertain. Although agriculture adjusted fairly readily to the sharp increases in energy (and energy feedstock) prices in the 1970's, it did so under conditions of generally rising farm product prices. The real price of fossil fuel energy is not expected to rise much for the remainder of this decade and possibly to 2000, but the events of the last decade are fresh enough to remind us that expectations are not necessarily realized. Energy uncertainty highlights the importance of U.S. public policies that will encourage energy conservation, development of indigenous energy supplies—including nonpetroleum sources—and development of energy-conserving technologies and production systems.

Energy is an important component of inorganic fertilizers, but fertilizer prices have increased less rapidly than the price of energy in recent years. Assuming only gradual increases in real energy prices, fertilizer prices seem likely to increase at rates close to general price levels in the decade or two ahead. Further, some project much slower rates of growth in fertilizer use, in part because of higher fertilizer—farm price ratios and in part because of possible environmental regulations.

As for other types of major manufactured inputs, such as machinery, equipment, feed, and pesticides, long-term supplies seem to pose no major constraint to 2000. Their prices, too, are expected to follow general price trends in the economy.

Governmental regulation.—Environmental policies to restrict the use of fertilizer and pesticides may become important enough to significantly change the mix of production inputs by 2000.

About 1,000 new chemicals are introduced each year in the United States, with some 55,000 to 60,000 marketed primarily from domestic manufacturers. Only a small proportion of the total is used directly in agriculture, but it is a proportion that in absolute numbers has been growing exponentially in the last 20 years. Comparatively little is known about the potential toxicity of many of these chemicals, how they are used, whether and how they enter the food chain and other ecosystems, and their ultimate effects on human health and on other species. Controls on pesticides in agriculture have become more stringent, and progress has been made in less toxic but effective pesticides and in integrated pest-management systems that reduce application rates. Nonetheless, pesticides remain a solid part of the production of major field crops.

The issues surrounding agriculture and the quality of the natural environment are neither transitory nor ephemeral. Nor are solutions simple or absolute. It is impossible to reduce the environmental risks of high-tech agriculture to zero: Tradeoffs between food production, food quality, and quality of the environment are inevitable. By the 21st century, the choices will be more complex, more difficult, and more important to both agriculture and the remainder of society.

Projected production and resource use, 2000 and 2020

Production increases to meet projected demand for U.S. food and fiber might be met through various combinations of natural resources, other production inputs, and production technologies. Three such possibilities are presented in figure 6.

No breakthroughs.—In general, the scenarios in figure 3 (column *A*) might be regarded as a "static technology" option. With no increase in per acre yields of major crops, an additional 95 million harvested acres would be needed to meet projected requirements in 2000; more than 200 million harvested acres would be required by 2020. Clearly, demand for cropland of this magnitude would place enormous pressure on the cropland base. The result would not only be dramatically higher land prices, but also higher costs of crop and livestock production, higher food and fiber prices to consumers, and economic pressure on the forestry sector, with possible higher prices for forest products. Soil erosion and water pollution surely would worsen as production expanded to more and more ecologically fragile cropland.

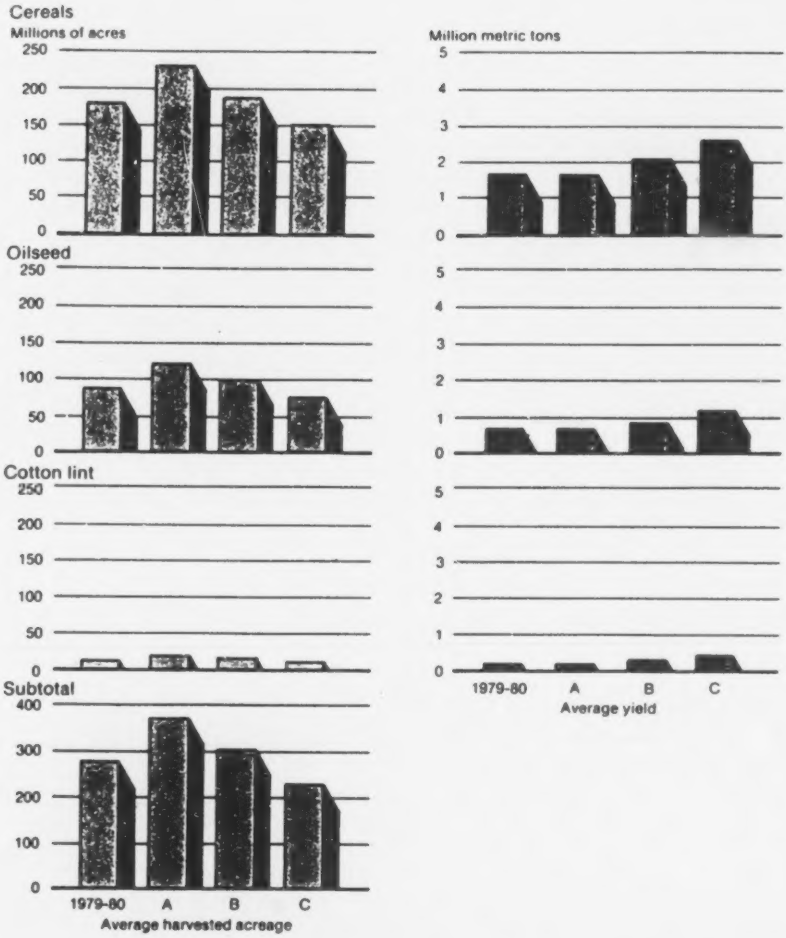

Figure 3. Actual and projected harvested acreage, yield, and production of principal crops. Column A, yields equal to 1979–81 average; column B, yields and acreage projected by EPI; and column C, yields projected by the RCA Symposium.

However, such a land-using course of development represents an unlikely outer boundary. Increased demand for land would stimulate substitution of other inputs and management practices. And if prices of farm products rose as a result of higher production costs, the projected increase in consumption of food and fiber would slow. Thus, even without new technologies to enhance crop yields, the "equilibrium" demand for land would fall far short of the forgoing projected land requirements, albeit at levels well above the present.

Optimism.—A much different scenario would ensue from the "most probable" yield increases projected by scientists participating in the 1982 RCA Symposium (see figure 3, column *C*).[9] Were those yields attained—generally on the order of 1.5 to 2 percent per year gains relative to the 1979–81 average—harvested cropland requirements would decrease by as much as 55 million acres by 2000 and, by 2020, still would be nearly 309 million acres below the 1979–81 average.

The RCA Symposium projections of yields are based on technology that already exists but has not been adopted—the best efforts on today's test plots could be the farmer's average yields in the year 2000.[10] Similar optimism prevails for livestock productivity: probable production gains per breeding animal of 25 percent for beef and pork and 30 percent gain in milk output per cow are projected for the turn of the century. Productivity gains projected to 2020 are based on recently conceived technologies that could be made practical through further research and development during the next 40 years. Implicit in these high-tech projects are assumptions of favorable economic circumstances to encourage farmer adoption of technology, improved managerial capabilities, regional and interregional shifts in resource use, increases in, double-cropping, and increased or more effective use of inputs such as fertilizers, pesticides, and livestock feed additives. But major gains also would come from such emerging technologies as nitrogen fixation, insect- and disease-resistant and drought-resistant crop varieties, and a variety of genetic-based livestock technologies.

A middle course.—An intermediate scenario is presented in column *B* in figure 3. The yield projections are based on long-term trends adjusted to conform with what we believe to be plausible growth rates considering available technologies, probable product-factor price relationships, and the expansion of crop production on lands likely to be less productive than current cropland. Under these conditions, an increase of about 25 million acres of harvested cropland would be needed by 2000—17 million acres to sustain increased production of cereals, 13 million acres for oilseed, and slightly less than 1 million acres for cotton. Reductions of nearly 6 million acres in harvested cropland for barley, oats, and other cereals would partially offset increases in cereal and oilseed acreage. By 2020 nearly 50 million additional harvested acres relative to 1979–81 would be required.

Several potentially important implications can be drawn from these projections. Under the high-tech projections (see figure 3, scenario *C*), less pressure would be put on the cropland base than has existed in recent years. Indeed, the possibility of major crop surpluses would have to be monitored carefully. However, with intensive use of land in production, increased use of fertilizers and pesticides, and a relative shift in land use to soybeans and corn, problems of soil erosion, water quality, and environmental pollution could be exacerbated. Under the land-using scenario (figure 3, column *A*), the tendency would be to plant "fence row to fence row," using relatively less of the high-tech inputs. Soil erosion, water quality, and environmental degradation problems also are part of this picture, but they come from a different source—the expansion of production on land that is ecologically more fragile. Thus, in either case economic and ecologically plausible resource conservation technologies, management practices, and public policies are likely to play critical roles.

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[9] "RCA Symposium: Future Agricultural Technology and Resource Conservation," Executive Summary (Ames, Iowa State University Center for Agricultural and Rural Development, 1983).

[10] Ibid.

In the intermediate projection (figure 3, column *B*) problems of several types might emerge, with erosion heading the list. Again, this is because the projected net expansion of 25 million acres of harvested cropland would require substantial additional capital investment and in some areas of the Midwest, Delta, and the Southeast might push production onto erosive, fragile land. Also, the conversion of land now in pasture could lead to economic adjustments in the livestock-dairy sector in several regions.

Thus, while attaining projected output levels seems reasonable with the economic supply of natural resources, technologies, and nonfarm inputs we expect for the next two decades, it will not be achieved without substantial adjustments throughout the sector, including adjustments of human capital. Nor will such adjustments be distributed evenly among regions, farms, and farm families.

Science and education

Public and private investments in science and education have been mainsprings in the American economy and in improved standards of living, and in no sector is this more evident than in agriculture.[11]

But along with the benefits have come social costs and unanticipated side effects associated with technical change—human and institutional adjustments not readily reduced to dollars, and environmental externalities and risks to human health. And the net benefits of science- and education-based technical change have been unevenly distributed within the population.

Some analysts note evidence of an apparent slowing in long-term total factor productivity growth rates since the mid-1960's as gains from the technologies of an earlier era wane with widespread adoption. Some are concerned that the near-static real total expenditures for agricultural research in the U.S. Department of Agriculture and the State agricultural experiment stations for almost 20 years may further slow productivity gains in the decade ahead. Others allege declining emphasis and reduced real funding levels for basic research in recent years that will magnify the possibility of a future slowdown in productivity growth unless such trends are reversed.

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[11] Vernon W. Ruttan, "Agricultural Research Policy" (Minneapolis, University of Minnesota Press, 1982) pp. 242–243.

Our projections suggest that long-term planning for agriculture should be predicated on a 70- to 100-percent increase in effective global demand by 2020 for U.S. food and fiber at real prices close to those of recent years. Moreover, we do not allow for the great uncertainty inherent in developing global agricultural systems, or for food assistance to persons in the United States and abroad who are unable to secure adequate nutrition in the marketplace. In short, we believe that meeting the projected demands for 2020 without additional productivity-enhancing technologies and improved production systems would place inordinate pressure on the Nation's natural resource base, induce serious environmental consequences, and substantially increase real prices to consumers of food and fiber.

Johnson and Wittwer estimate that a 45-percent increase in agricultural output incorporating about a 30-percent increase in crop yields would be attainable by 2020 by maintaining public funding of agricultural research at the real level of 1983 and as a constant proportion of the value of agricultural output throughout the 40 years. To obtain a 75- to 80-percent increase in output and a 55- to 60-percent increase in crop yields in 2020, they estimate that public funding of research would need to be increased at a compound annual rate of 10 percent between 1983 and 1994 and as a constant proportion of the value of agricultural output over the 40 years.

SUMMING UP

No one's crystal ball is in perfect working order, and ours no doubt has its share of cracks and cloudy areas. The future, after all, cannot be foretold. Still, we believe this report to be a reasonable, even conservative, estimate of the global shape of food and agriculture when this century finally gives way to the next. That our conclusions tend to be upbeat, especially when compared to 1970's style prophecies of gloom and doom, is all the more significant in that we do not shrink from addressing negative trends and taking them into account.

Global projections

For example, we foresee many more mouths to feed. World population, although slowing in growth, will increase nearly 40 percent or 1.74 billion persons by 2000 relative to 1980, with the overwhelming majority of them living in the least developed regions of the world. Between 2000 and 2020 population may increase another 1.79 billion to nearly 8 billion persons—almost double the population of 1980.

Moreover, global economic growth—rapid during the 1970's—will be comparatively slow in the 1980's as economies recover from recession and, in the case of several developing countries, strive to manage large external debts while restraining inflation. Nevertheless, given an appropriate mix of development policies and an environment conducive to international trade and capital investment, economic growth can increase in the 1990's, with two major possible exceptions: Prospects for growth are particularly fragile in Latin America and Sub-Saharan Africa.

The combination of population and economic growth will boost effective demand. At real prices approximating those of 1979-81, we expect effective global demand (consumption) for agricultural products to jump substantially by 2000—about 60 percent for income-sensitive commodities such as meat and oilseed, close to 50 percent for cereal grains, and 35 to 40 percent for milk and natural fibers. By 2020, effective demand could more than double for income-sensitive commodities and increase as much as 90 percent for cereal grains.

Even given these trends, however, we believe that the world possesses the potential to feed a growing population of 6.1 billion people moderately better by the year 2000 than it fed 4.3 billion in 1980.

But to do so will require large investments to improve the infrastructure of agriculture, increased investments in research and education to stimulate development and application to productivity enhancing technologies, public policies to provide greater economic incentives to agricultural producers in many developing countries, and expanded international trade. We estimate that some 85 percent of projected production of resources and only 15 percent on expanding the cultivated land base.

Let us also make clear that we are not predicting a world of perpetual plenty or one unmarked by worry or regions of shortage. Even with the projected modest increases in per capita food supplies and consumption, the global food supply—demand balance in 2000 will be tenuous and subject to much year-to-year instability. Large numbers of people in the developing countries unable to share in economic growth will continue to be undernourished.

U.S. projections

U.S. agricultural production grew nearly 40 percent in the past two decades. By 2000, production of cereal grains and oilseed will need to increase another 30 to 40 percent and that of other major products about 20 percent. By 2020, production of major crops may be 70 to 100 percent above recent levels to meet projected growth in demand in domestic and foreign markets, especially the latter. Indeed, we believe that U.S. agriculture will depend increasingly on cash crops and on the export market.

Greater reliance on exports implies greater instability and uncertainty for U.S. producers and consumers of food and fiber, in large part because of domestic and foreign economic policies. Thus, in addition to being required to grow at a substantial continuous rate into the 21st century, the United States needs to maintain a fine balance between supply of food and fiber and a potentially volatile export demand.

As we noted at the outset, the productive capacity of U.S. agriculture has expanded a great deal in recent decades, and we see no reason for the process to come to a halt. On the contrary, it can be further expanded through various combinations of improved management of resources and technologies now employed, expanded use of resources, and new or improved technologies to enhance resource productivity. The manner and extent to which productive capacity is expanded and utilized depends on a plethora of complex technological, institutional, and economic variables and on private and public choice, but we believe that the United States can readily sustain increases in output to meet projected global demand for its products to 2000 at real prices in the neighborhood of those of 1979-81.

To expand productive capacity to permit a near-doubling of output to meet projected demand in 2020 without major increases in real prices will require major public and private investments in science and education to yield new and improved technologies and management systems to maintain or enhance resource productivity. Continued growth in total factor productivity is needed to maintain our competitiveness in world markets and stave off growing pressures on the natural resource base, increasingly serious environmental problems and, ultimately, higher real costs for food and fiber.

Two big unknowns

We close with a word about weather, one of the most important short-term influences on agricultural production and food availability. As will have been noted, we do not expressly treat year-to-year variations in global weather. Rather, by implication, the trends projected assume "normal weather; that is, weather about as favorable as the average during 1970-82. In any given year, unusually favorable weather can push production well above trend and permit higher consumption the following year. Conversely, especially adverse weather would depress output well below trend and subsequently decrease consumption. A series of good or bad years would amplify those impacts, but the year-to-year variations are expected to cluster around the trend.

And undergirding our entire analysis is the assumption that world peace will not be shattered in the decades ahead.

AGRICULTURE AND U.S. TRADE POLICY

(By D. Gale Johnson, the University of Chicago)

A little more than three decades ago I wrote a book with the title "Agriculture and Trade: A Study of Inconsistent Policies".[1] Except for a number of details and changes in dates, a book on the same topic would be as timely today as when it was written at the time the General Agreement on Tariffs and Trade [GATT] was negotiated and a new framework for trade liberalization was created, and the general structure of such a book today would differ little from the 1950 version and, unfortunately, the same general conclusions would be put forward.

The basic source of the inconsistency between agricultural and trade polices, now and then, is that particular agricultural price and income programs require control over international trade as an adjunct to carrying out the domestic programs. When governments intervene in agriculture product markets through price supports or commodity loans, minimizing the cost imposed upon the public treasury requires that imports be restricted and, if domestic output is larger than can be sold in the market at the artificially established price, then export subsidies are required or stocks will be accumulated until they became so burdensome that they must be disposed of by one or more means.

In 1950 I wrote as follows: "The group of programs that constitute what may be called agricultural price programs has required the insulation of domestic markets from the impact of alternative sources of supply. These programs have driven a wedge between domestic and foreign prices of the same product. They have operated on the premise that the way to improve the income of the American farmer is to raise prices. No one nation by itself, with only minor exceptions, can afford to take the actions required to raise the level of prices for a product in world markets. To do so, as the United States tried with cotton in the middle thirties, leads to increased production in other nations and the loss of a large share of the export market" (p. 28).

What was written about the interrelations between certain types of domestic farm programs; namely, those that attempt to achieve their objectives by intervening in market prices, applies with equal force today and not only to the United States but to nearly every nation in the world. The majority of the interventions in international trade in agricultural products, whether involving limitations on imports or exports or subsidization or taxing of exports, are undertaken as a consequence of domestic agricultural and food policies. This is the most important reason why it has been so difficult to successfully negotiate reductions in agricultural trade barriers. To negotiate about agricultural trade is very often to negotiate about domestic agricultural programs and policies, such as the level of dairy price supports in the United States and Canada, the target prices established by the European Economic Community, or the high domestic prices for beef, rice, and wheat in Japan or the low price of bread in Egypt. So far no country has been either willing or able to engage in meaningful negotiations about the domestic agricultural programs and policies that require particular trade barriers and interventions.

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[1] To be presented at the conference, Agriculture in the 21st Century, Richmond, VA, Apr. 11-13, 1983. ©Phillip Morris, Inc., 1984

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My emphasis will be upon the United States and the continuing conflicts between agricultural and international trade policies. Put simply the United States professes its support of a liberal trade policy and has had the major leadership role in the world in pressing for more liberal trade for nearly a half century. And while the conflicts between domestic farm programs and a liberal trade policy are now less numerous and striking than in 1950, many of the conflicts have persisted without abatement and others have emerged in a more subtle form. This paper will not be about the protectionist measures of our major trading partners. It is time, in my opinion, that we take a serious look at ourselves—to take a good look in the mirror—and reflect upon what we would have to do if we really practiced what we preached.

Trade and agricultural policies

Officials of the U.S. Government have long complained about the trade restrictions and interventions affecting agricultural trade imposed by most of our major trading partners. Currently we are passing Japan and the European Community for significant modifications of their agriculture and trade policies. The modifications would reduce the level of protection of agricultural and thus expand the opportunities for exports of U.S. farm products. The reduction in the level of protection may affect either the amounts imported or the quantities exported by particular countries.

Over the past quarter century there has been substantial progress toward the liberalization of trade in manufactured products, and this is true even with the recent protectionist moves of many industrial countries. However, none of the major rounds of GATT negotiations has resulted in a significant reduction in the barriers to imports or uneconomic maintenance of agricultural exports. One important reason for the greater intractability of agricultural trade barriers is that such barriers and interventions result from the features of domestic agricultural policies and programs. In other words, trade interventions result from the consequences of decisions that determine national prices, production and consumption. Consequently, nations when pressed to reduce their agricultural trade interventions often respond by retorting that this is an illegitimate interference with their domestic policies. Trade interventions generally cannot be reduced except by changing some component of an agricultural program, such as the level of price support.

The complaints made by the United States have had minimal effects in reducing trade restrictions that impede the flow of trade in agricultural products or the value or quantity of our farm exports. Why is this so? Perhaps the most important reason has been noted; namely, that trade interventions are generally extensions of domestic agricultural policies. But there is at least one other important reason, namely that the United States continues to utilize means of trade intervention that are of the same type as those we argue should be reduced or abandoned. Claude Villain, an often shrill spokesman for the common agricultural policy of the European Community, can say with much truth and only some exaggeration:

> * * * Let me say how amazed and even envious I am when I review the panopoly of instruments which a liberal country such as the United States possesses to support its exports.
>
> To mention only some, there are measures of trade promotion, export credit, export guarantees and insurance, food aid under Public Law 480, the DISC tax arrangements, government-to-government agreements particularly for milk products, the drawback system for sugar, and so on.
>
> I will simply say that if you compare the budget spending on agriculture with the value added of the agricultural industry, you will find that in 1976 to 1978 the ratio in the EEC was 39.2 percent and in the USA it was 37.6 percent. That is nothing like the gap which some critics would have you believe.
>
> Initially, the 1982/83 U.S. farm budget envisaged large reductions. However, substantial revisions have since been made which increase foreseeable outlays by some $6.8 billion. When I look at the farm bill, I see that the target price system is continued, that the milk support program, despite some changes is still likely to lead to a big surplus, and that a new sugar support program is being introduced. I always thought that the United States was the great defender of free competition, but I must say that all these target prices and support programs have a familiar European ring to them * * *.
>
> * * * I must say that I think the free-trading United States is armed with a remarkable weapon in the form of the GATT waiver. This is the exemption which since 1955 has allowed you to ignore certain rules of the GATT; and I note that the U.S. authorities have invented an impressive number of other measures, including import quotas, supplementary taxes, domestic price rules, and marketing orders.

As 1982 came to a close the United States was threatening to engage in an export subsidy war with the EC in an effort to counteract presumed losses of exports of grains and chickens resulting from the high levels of export restitutions paid by the EC. On this point, I am in complete agreement with Villain who responded to a statement by Secretary Block to the effect that the United States was " * * * going to do battle with the EEC wherever and whenever it is necessary" by saying: "Make no mistake about it: if there is economic warfare between the United States and Europe, there will be no winner. Both of us will be losers." What Villain did not add is that there would be other losers; namely, the competing exporters such as Brazil and Thailand, that do not have the enormous financial resources available to officials of the world's great economies. I must admit that I can think of nothing that would be more effective in strengthening the position of the supporters of the common agricultural policy than an export subsidy war Such a war would only confirm the view that the United States intervenes in agricultural trade to the same degree as does the European Community.

What if there were free trade

On occasion I have a dream. In that dream I see consternation on Capitol Hill, on Independence and Pennsylvania Avenues in Washington where the European Community and the Japanese offer to eliminate all economic barriers to trade in agricultural products except for a modest ad valorem tariff. The consternation is great, indeed. The U.S. Government has made no plans to respond to an offer of a significant liberalization of trade in agricultural products. There is no difference on this point, either in my dream or in the real world, between Democrats and Republicans. In fact, there has been a nearly universal unwillingness to even consider what the consequences of such liberalization might be.

When I awake from my dream, I remember that there does exist a report done in the early 1970's at the request of the Council on International Economic Policy as a part of the preparation of a proposed round of multilateral trade negotiations. The report which had been prepared as an internal document to assist in the determination of a negotiating position was leaked by the late Hubert H. Humphrey, presumably in an effort to embarrass the Nixon administration. In the report, generally identified as the Flanigan report, the unimaginable had been asked—what would be the trade and some of the economic effects of a significant liberalization of agriculture trade by the United States and the other industrial countries? At the request of Peter Flanigan, a more detailed study was prepared to estimate the effects of trade liberalization upon employment in agriculture and net farm income in the European Community and Japan. The work was nearly completed in 1973 but the report was never published since it was decided in the Office of the Secretary of Agriculture that there would be adverse foreign reactions to the results.

So far as I know there has been no subsequent work along the same line undertaken by the U.S. Government. Nor has there been any systematic effort to indicate how U.S. farm programs could be made consistent, over a defined period of time, with a liberal trade policy. Trade is now so important to U.S. agriculture that it would seem appropriate for some responsible component of Government to consider how the United States could accept substantial and universal liberalization of agricultural trade. This may seem too utopian to consider, but there is much in-between ground that could be covered that would improve our position as a supporter of liberal trade in agricultural products. As things now stand, it is rather easy to characterize the U.S. position as one of favoring trade liberalization for products that we export but also one that is highly restrictive for imported products that are competitive with our own production. This is something of a caricature—but not very much. I shall devote the rest of my remarks to this issue.

GATT provisions for agriculture

The General Agreement on Tariffs and Trade [GATT] permits special forms of protection for agriculture. These provisions were included at the insistence of the United States. One of these is article XVI which deals with the issue of subsidies, both domestic and international, for agriculture. Under article XVI countries are not supposed to use subsidies "including any form of income or price support, which operates directly or indirectly to increase exports—or to reduce imports of any product." No form of direct or indirect subsidy is to be used to acquire "more than an equitable share of world exports, account being taken of the shares * * * during a previous representative period, and any special factors * * *." The loose nature of the provisions with respect to the use of export subsidies plagues GATT to this day; apparently the Tokyo round accomplished nothing with respect to subsidies and countervailing duties and the discussions to implement the code envisaged by the agreements reached have gotten nowhere in 3 years.

Article XI bravely provides that "no prohibitions or restrictions other than duties, taxes, or other charges" shall be "instituted or maintained on imports or exports." Specific reference was made to the banning of quotas and licenses and similar measures. But, alas, the second paragraph of the same article included a clause, at the insistence of the United States, that quantitative import restrictions could be used where necessary to the enforcement of governmental measures which (a) restrict domestic output or marketings or, (b) remove a temporary surplus from the market by making it available to certain groups of domestic consumers at less than current market prices, or (c) restrict the output of an animal product directly dependent on the imported product.

U.S. farm programs and GATT

The United States has a number of farm programs that clearly violate the letter or spirit of GATT. Some of the provisions have no significant economic effect but yet are retained in spite of their violation of GATT article XI. Other provisions that violate GATT provisions do have significant economic effects. Frankly, it is relatively easy to see why foreign officials react with skepticism when we loudly proclaim our support for liberal trade in agricultural products while we have a GATT waiver so that we can maintain import quotas on dairy products since our dairy price support programs are not designed to "restrict domestic output or marketings" of milk. Quite the contrary; the programs are in fact designed in such a way that milk production is encouraged.

While it is true that the United States has fewer quantitative restrictions on imports of agricultural products than any other industrial country, save perhaps Australia, it is not particularly helpful to be reminded that (Mangum and Rossmiller):

> And some would argue that the section 22 legislation and the waiver that grandfathers it into GATT is proof positive that agriculture is basically protectionistic. But section 22 provides for border protection mainly in the form of quotas not to protect agriculture per se, but rather to protect the ability of the Government to carry out effectively the mandated agricultural price support programs without undue cost to the Treasury. In recent years section 22 has been invoked for dairy, sugar, peanuts, and cotton but not for the main traded commodities wheat, feedgrains, rice or soybeans (p. 5).

These sentences are from what is an otherwise excellent paper on U.S. agricultural trade policies, and the efforts to ward off protectionist moves, by the Director and Deputy Director of the U.S. Foreign Agricultural Service. What I find objectionable, but probably realistic, about the quoted words is that the import quotas imposed under section 22 are used to hold down Treasury costs and not to protect agriculture. Either this means that we have import quotas that violate GATT principles, and this was true for at least three of the four cases cited, for the convenience of the bureaucrats, or to reduce Treasury costs, and thus make the farm price support programs more acceptable to the American voters. The latter reason can just as readily be given to justify the variable levies and export subsidies used by the European Community and the numerous import restraints imposed by the Japanese to maintain their somewhat peculiar internal price structure for agriculture.

The most blatant of our violations of GATT principles is our dairy price support program. We use import quotas; we use export subsidies to dispose of part of the mountains of butter and dry skim milk that we acquire in our efforts to maintain dairy product prices at levels significantly above those of the world's low cost producers. We often cloak our subsidized exports by calling them food aid, but in doing so we fool no one except possibly ourselves. In nearly three decades we have done nothing to bring our dairy programs into conformity with our GATT obligations; we have apparently considered it preferable to continue to take advantage of the GATT waiver. This has been done in spite of the substantial impairment of our negotiating position for liberalizing agricultural trade that results from the existence of the waiver.

The weakness of our commitment to GATT principles and liberal trade in agriculture products can be discerned by considering some of the consequences of our dairy price support programs. From 1960 until 1975 our dairy price supports did not encourage increased milk production; in fact, over that period milk production declined by 6 percent, admittedly not very much but nevertheless it declined. But in response to sharp increases in milk price supports in early 1977, milk production increased by 15 percent through 1981 and continued to increase further in 1982. In 1981 the U.S. Government had to purchase a tenth of total milk production to meet its price support commitments. While a significant fraction of the milk acquired by the Government was disposed of domestically, in 1981 we exported the equivalent of 1.4 million metric tons of milk while importing just 1.0 million tons. This is not the pattern of trade that would have resulted from a liberal trade regime. With liberal trade we would be a significant net importer of dairy products.

In recent years our farm prices for dairy products have been equal to or higher than those received by farmers in the EC. In 1980 U.S. farmers received $28.60 for 100 kilograms of milk sold to all plants; the average price received by farmers in the Netherlands was $28.70 and in France $26.85. In 1981, when the value of the dollar was much higher than in 1980, milk prices received by U.S. farmers were a quarter higher than prices received by Common Market farmers when local currencies were converted to dollars. And the U.S. dairy farmer had access to significantly cheaper feed than did his Common Market counterpart.

And it is not possible to argue that the recent return to a sugar program dependent upon high price supports and import quotas is consistent with GATT principles for exceptions to the use of tariffs as the only acceptable instrument for limiting imports. The current program has no significant output control features and imports of sugar are being adversely affected by the high support prices for sugar and the encouragement these high prices give to the increased production and use of high fructose sugar from corn.

U.S. imports of sugar have declined from nearly 6 million short tons in the early 1970's to 3 million short tons by 1982. Over the same period of time sugar production in the United States has remained approximately constant, with modest year-to-year variation but no significant trend. The decline in imports of sugar has been due to the increased domestic production and consumption of high fructose sugar, displacing about 20 pounds of sugar per capita between 1970 and 1980. If present trends continue we will be a minor sugar importer by the end of the present decade, primarily due to a price policy that encourages the production and consumption of a substitute for cane and beet sugar. Has anyone bothered to ask if such a reduction of sugar imports is in the interest of U.S. agriculture? If so, I do not know who has considered this question.

The commodity programs for major export commodities—wheat, feed grains and cotton—have features that bring U.S. policies into conflict with GATT provisions on the subsidization of output. These programs contain a number of subsidies. Currently the most important ones are the deficiency payments and the subsidies on the storage of grains under the Farmer Held Reserve Program. Until recently the disaster payments program represented a clear subsidy to farm production by making payments when yields were below some specified level. By both reducing risk and increasing the mean level of income, the program encouraged a higher level of output than would have otherwise occurred. The disaster payments program has been replaced by an insurance program, but it must be noted that the insurance program involves a subsidy since premium income will be substantially less than the cost of claims.

The European Community permits free or nearly free entry of a number of nongrain feed materials, including corn gluten feed. Such imports have displaced several million tons of grains, perhaps as many as 14 million tons, in the EC livestock rations; in 1980 corn gluten feed imports were 2.6 million tons, up from 0.7 million tons in 1974. The United States now exports 90 percent of its corn gluten feed production of about 3 million tons, compared to just a third a decade ago. One of the important sources of corn gluten meal is the production of high fructose sugar; a much less important source is the production of ethanol for use as a motor fuel. Each of these end products is now heavily subsidized, the one by the high domestic price of sugar and the other by the forgiveness of Federal and other gasoline taxes on gasohol. In addition, we have had significant credit subsidies and guarantees for the construction of production facilities for ethanol. Small amounts of corn, claimed to be offgrade, have been sold by the Commodity Credit Corporation at subsidized prices for the production of alcohol. While the corn may be offgrade, the corn gluten meal produced from it is not.

One might ask if anyone in policy positions in the U.S. Department of Agriculture or in the White House or members of the relevant committees of Congress ever asked the question if the substantial indirect subsidies of such grain substitutes endangers the duty-free status of this high quality feeding material. It is more than a little curious that we are satisfying two very small special-interest groups; namely, domestic sugar producers that number no more than 15,000 and only a handful of firms that produce high fructose sugar.

Moreover, the benefit to corn farmers from the high fructose sugar subsidy and the export of less than 3 million tons of corn gluten feed to the European Community is very small. With the United States producing 250 million tons of feed grains, the increase in grain processed for high fructose sugar and for ethanol, even if this were a net increase, would have little effect upon the United States and the international market price for corn and other feed grains. And the EC imports of corn gluten feed do not represent a signficant net increase in demand. Thus far these imports appear to have had little effect on EC feed grain productions and consequently the increase imports have been largely offset by larger EC grain exports.

Furthermore, it is highly likely that most of the gains from the expanded production and exports of corn gluten feed go to the firms in the wet-milling industry. In the early 1970's corn gluten feed was priced at approximately 10 percent below the price of corn; in the United States from 1979 through 1981 corn gluten feed was priced as much as 12 percent more than corn and in 1 year only 2 percent less [USDA]. The higher relative price of corn gluten feed compared to corn could not have had a significant effect upon the price farmers received for their corn.

Both the United States and the European Community have had difficulties in disposing of their respective "butter mountains." The European Community, in spite of significant resentment of its citizens, sells some part of its mountain to the Soviet Union at bargain basement prices. People who pay about $2.50 per pound for butter have some reason to resent a sale to the U.S.S.R. at about a third of that price. Because the United States complains so loudly about the EC's use of export subsidies (dumping) to dispose of its agricultural surpluses, there is some sensitivity in Washington about how our actions will be received.

In September 1981 the officials of the U.S. Department of Agriculture came up with a solution to minimize the adverse reactions to a substantial export of butter at a highly subsidized price. The solution, were it a mechanical invention, would have rivaled any Rube Goldberg flight of the imagination (Smith). New Zealand is the world's lowest cost producer of dairy products and the world's largest exporter. You guessed it. The United States sold 100,000 tons of butter to New Zealand at a price that was less than half our wholesale price at the time. The loss was in excess of $155 million. The butter was disposed of in this way rather than selling directly into the world market for two main reasons:

> (1) A major buyer of butter in the world market at the time was the Soviet Union "* * * to sell butter at subsidized prices to the Soviet Union would be to send the wrong signal to the Kremlin during a very tense period in foreign relations" (p. 6).
>
> (2) The United States is said to be very conscious of its commitments "to open and nondiscriminatory world trade and our obligations under the General Agreement on Tariffs and Trade [GATT]" (p. 6). About this time the U.S. had been challenging "* * * Japan's use of subsidized rice exports and the European Community's increased use of subsidies on exports of wheat, flour and poultry, and we are gaining support in these efforts from third countries. To unload 220 million pounds of subsidized butter on the market could call into question the sincerity of these U.S. efforts to restrain the use of subsidies by other nations."

I do not believe that the USDA was able to disprove the famous dictum: "A rose by any other name is still a rose." And so an export subsidy by any other name is still an export subsidy, even when the sale is among friends.

Trade and U.S. agriculture

The prosperity of U.S. agriculture depends upon export outlets for its production. The production from nearly two-fifths of all cropland is exported. We export more than half of the output of wheat, cotton and soybeans and over a third of the output of feed grains. If these markets were lost or significantly reduced, American agriculture would face a long period of adjustment during which returns to farm resources would be adversely affected.

It is not possible to dispute the view that U.S. agriculture has much more to gain from liberalizing trade than from maintaining the restraints on imports that we have and from the direct and indirect output subsidies. Yet there has been almost no effort made to modify our farm programs to make them more consistent with the GATT principles for governing trade in agricultural products.

During the 1950's and 1960's U.S. agricultural policy was modified by reducing the level of price supports and the need for governmental intervention, such as export subsidies. Over an extended period of time, price supports were reduced to levels that were generally below market prices. The market was permitted to allocate the available supplies among the competing market outlets, including the allocation between the domestic and foreign markets. These changes occurred, however, exclusively for those products for which the United States had a comparative advantage; namely, the major export crops of cotton, wheat, and feed grains. Soybeans had generally not been burdened with high price supports, except in 1968 when election politics were stronger than economic rationality.

The changes in domestic farm programs were associated with a rapid growth in exports of farm products. The United States did not have signficant net exports of agricultural products until the early 1970's, but even this small excess was a change from our being a net importer as late as 1956. While the policy changes were effective in achieving an expansion of exports, we did nothing to liberalize trade in certain products where we had severe trade restraints, such as for dairy, peanuts, and sugar until well into the 1970's and not at all for dairy products. And in the mid-1960's, as we were preparing for the Kennedy round of negotiations, our dedication to liberal trade was revealed by the imposition of quotas on beef and veal imports. Import quotas and export subsidies continued to be applied to dairy products. Our sugar program remained an affront to liberal trade until 1974 when the sugar program was abolished, but for a relatively brief period (Johnson 1974). Our current sugar program is at least as restrictive as the program of the 1960's and early 1970's. While the peanut program was modified during the 1970's by introducing a two-price system that reduced the degree of subsidization, it still required import quotas to maintain the high domestic price for edible uses of peanuts. The modification to the peanut program that provided for pricing marginal peanut production at approximately the market price has not resulted in a decline in peanut production. In part this may be due to the very high price paid for the so-called quota peanuts.

With the possible exception of the peanut program, we have made no efforts to liberalize trade in the farm products that we would import under a liberal trade regime. We remain in significant violation of GATT principles, or would if we had not used our muscle to obtain a waiver. Some 15 years ago, as one of the members of the National Advisory Commission on Food and Fiber I presented rough outlines of adjustment programs that would permit eliminating most if not all quantitative restrictions on imports as well as doing away with export subsidies (1967). I believe I made a reasonable case that for peanuts, sugar, manufactured dairy products, rice, wheat, feed grains, wool, cotton, and tobacco it would be possible to eliminate the trade disruptive aspects of the then existing commodity programs and, where necessary, to fully compensate all those who would lose from the required program modifications. I do not argue that my proposals were the most appropriate ones that could be devised. What I now say is that I have not seen any alternative proposals that would accomplish the same objectives, including the reduction or elimination of interventions in trade in agricultural products.

The costs of price supports and their associated trade restrictions to consumers and taxpayers for sugar, peanuts and dairy products are so large and the net income benefits so small that it would be possible to compensate all who would lose from trade liberalization from the savings to consumers and taxpayers for a relatively brief period of time, perhaps no more than 2 to 4 years. I have made no recent estimates of the costs and net benefits, but in an earlier time I did so. For sugar for the early 1970's I estimated that full compensation for loss of income to producers (present value at 10 percent interest) plus full compensation for the capital loss to processors plus 1 full year's wages to all employees engaged in sugar production and processing would cost no more than the savings realized in 4 years from abolishing the sugar program (1974).

Concluding comments

How far we are from having a consistent and coherent liberal trade policy for the Nation and agriculture was recently revealed by the unsuccessful efforts of the U.S. Government to negotiate with the People's Republic of China textile quotas. The failure to reach an agreement acceptable to both sides resulted in China taking retaliatory measures. It may well be that the retaliatory measures taken by China will hurt China as much as they will U.S. agriculture. But this makes little difference. Another distortion in world trade in farm products has been created as China turns to other and presumably higher cost sources for its cotton, soybeans, and synthetic fibers. In many ways our national policy for the textile industry parallels our dairy program—for more than a quarter century major components of the textile industry have been protected by agreements intended to disguise our violation of the GATT principles that oppose quantitative restrictions on imports. Adustments in textiles that should by now have been completed if we were attempting to adhere to a liberal trade policy have not been made nor is there any evidence that the industry has been given signals that made it clear that adjustments were required. And why should it have adjusted if it could rely upon continued protection? But leaving aside the debacle of the textile quota negotations, it remains true that the textile industry is protected at the expense of the American farmer and, I might add, the American consumer. The American consumer who bears most of the costs by our textile trade policies are those with lower income, since it is low priced textiles that the quotas are primarily designed to exclude.

American agriculture has much to lose from rising protectionism in the world. While the spread of protectionism is due, in part, to the current worldwide recession, it is not obvious that all of the forces in the United States that are pushing protectionist measures will be dissipated by even a strong recovery and prosperity. American farmers should not assume that a return to high levels of employment will be enough to prevent further erosion in our liberal trade policies.

Farmers and those who represent them and support them must be aggressive in resisting the current moves to increased protection and must not relax their vigilance in the expectation that recovery will assure the abolition of some of the recent departures from the principles of freer trade. Some of the industries that are now complaining so strongly about import competition have acquiesced to cost structures that may well have destroyed the comparative advantage such industries may have at one time possessed. If so, it is absolutely essential that no effort be spared to fight the rising tide of protectionism; it cannot be assumed that the tide will recede automatically.

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COUNTERTRADE: AN ALTERNATIVE MARKETING STRATEGY IN AGRICULTURAL EXPORT TRANSACTIONS

(By James R. Jones)[1]

ABSTRACT

A descriptive analysis of countertrade is presented as background for understanding the possible uses and pitfalls of this variety of trading arrangement as an alternative agricultural marketing strategy. Countertrade appears to have considerable merit to an increasing number of foreign buyers, but this paper cautions that there are inherent problems with such arrangements that should not be overlooked.

INTRODUCTION

In recent years trading arrangements known as countertrade transactions have come into increased use. Countertrade involves a contractual form of business where exports are tied to reciprocal purchases of goods from the importing country in question. The seller is obligated under these arrangements to accept as payment or partial settlement for his exports purchases of goods from the buyer. Conclusive data on the extent of these transactions is not available, but some sources claim as high as 20 to 25 percent of total world trade is being consummated by these arrangements today (The Journal of Commerce, August 1982). It is only known that these arrangements are being asked for increasingly by hard currency strapped customers in a number of countries.

From the point of view of an ideal world in which trade and markets are unrestricted, countertrade represents a distortion in that it forces trade into a bilateral mode rather than a multilateral mode. In this paper countertrade transactions are considered as a possible element in marketing strategy in export sales. Countertrade has had limited application to agricultural export sales, but in a hard currency strapped world its role may expand. Recently, Indonesia tried to impose such terms on the Australian wheat board and Thailand swapped corn and other feed grain ingredients for fertilizer to the Soviet Union, Romania, and South Korea in 1981. U.S. pulse exporters have been approached to import coffee beans. In the future the ability and willingness to engage in business dealings on such terms may present a competitive edge to an export organization over other potential sellers.

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Countertrade is appealing to overseas buyers for several reasons. Countries which transact trade via state trading enterprises such as China, Eastern Europe and many developing countries have stressed use of countertrade in their commercial dealings with firms in the industrialized world for short term balance of payments and long term market penetration reasons (Mathson, et al., 1977). Countertrade is viewed as a means of generating or conserving hard currency through the offset deliveries provisions of countertrade contracts. Second, these countries recognize their own lack of success in penetrating the industrial Western countries' markets. They view countertrade as a way of using the access and marketing capabilities of firms operating in the industrialized markets to gain access to these markets.

Besides circumventing foreign exchange problems and offering a marketing strategy, countertrade practiced as a direct barter exchange is also a way that countries locked into overvalued fixed exchange rates may bypass exchange rate distortions. By direct trading the price distorting effects of overvalued fixed exchange rates can be bypassed. Finally, to the extent that the reciprocal nature of trade is more apparent in bilateral countertrade arrangements, countertrade might help subdue protectionist sentiments. The offsetting import transaction is obviously a necessary part of the export transaction and thus the two-way nature of trade might conceivably be more recognizable.

Characteristics of countertrade transactions

There are several forms of countertrade transactions. The major types of countertrade are counterpurchase, compensation arrangements, barter, and switch transactions. While such arrangements have been in existence for several years there is disagreement on the proper classification of these transactions. The classifications used here are based upon U.S. Department of Commerce usage (Verzariu, 1980).

Counterpurchase is a form of countertrade involving matching deliveries of goods as payment for goods exported to foreign buyers. Exports and imports are ordinarily transacted via separate, but linked, cash contracts. The value of imported goods may be less than the value of the goods sold by the exporting firm depending upon the terms negotiated by the two parties. Counterpurchase is the form that would most likely be relevant to agricultural export organizations.

Compensation arrangements (also referred to as buy back arrangements) involve payment for exports from resultant goods directly derived from goods or technology exported whereas counterpurchase arrangements usually involve nonresultant goods. Compensation arrangements have proven useful in trade transactions where the importing country has raw materials (such as energy and other mineral resources) needed in the exporter country or abundant cheap labor and the export firm is able to provide technological assistance, capital equipment, or other inputs to be used in manufacturing products based upon those inputs. Compensation trading applied to U.S. agricultural exports could involve U.S.

firms selling say grains and oilseeds and buying back livestock products. A broader cooperation arrangement might involve developing energy sources and buying back resulting products such as fertilizer and petroleum products as part of a long term agricultural export agreement.

Switch transactions are based upon multilateral (more than two countries) use of bilateral clearing accounts. These are essentially financial transactions between socialist countries and/or less developed nations whose currencies are nonconvertible and therefore have little application to the United States.

Countertrade is frequently described as a form of sales for which payment is made by some means other than cash but this is misleading since all of the above arrangements involve swaps expressed in monetary terms. There is also the barter transaction which involves the direct exchange of goods without any money being involved. Barter and countertrade are sometimes used interchangeably, but strictly speaking barter is a special version of countertrade.

Countertrade ingredients and procedures are varied and complex. The more common elements are summarized below to highlight what would or could be involved if countertrade terms were accepted as a basis of selling agricultural products to overseas buyers:

(1) A common and advisable procedure where countertrade deals are involved is to draw up separate contracts covering the export and import commitments.

(2) Third party trading houses are frequently used in countertrade transactions. Locating products that a U.S. exporting firm could agree to accept as partial or complete payment for a sale to an overseas buyer is difficult since the firm is seldom in the business of selling or using products imported. Developing the staff and organization necessary to do this may not be feasible. This is a problem frequently confronted by firms and a common way of getting around it is to utilize third party trading houses that specialize in disposing of goods acquired in countertrade transactions.

(3) If a trading company or some other third party is included in negotiations and/or disposing of the goods accepted in countertrade its role should be spelled out in the contract. For instance a common procedure is for the third party to issue a "serious indication" document indicating its willingness to assume the countertrade commitment of a specified commodity at a designated cost under the condition that certain specifications, clauses, and other conditions be followed in drafting the countertrade commitment contract with the overseas buying agency (Business International S.A., October 1979). This permits the seller to proceed with negotiations knowing the terms under which it can dispose of the countertrade items.

(4) Also when a third party trading house is to be involved in locating countertrade goods the contract should include a "transfer clause" specifying that the countertrade commitment can be transferred to it so that once countertrade products are located by the trading house the purchase contract can be explicitly linked with the original export sales contract and coun-

tertrade commitment (Business International S.A., November 1979).

(5) If agricultural export companies are dealing with a product that is high enough on the import priority of the buying country that the foreign trade bank has set aside hard currency to meet the importing foreign trade organizations' needs, legally binding countertrade contracts would usually not be a prerequisite to doing business. An alternative is to sign a "letter of intent." This amounts to a "gentlemen's agreement" between the buying agency and the U.S. exporter that the latter will undertake to purchase products from the country within a certain time period provided they are available on suitable terms. Such letters of intent are common in countertrade dealings with Eastern European countries. While the agreement is part of the original sales contract it is only morally, not legally, binding. This indicates the willingness of the exporter to reciprocate on a sale. Apparently letters of intent appeal to negotiators representing buying agencies at times since they can demonstrate to their superiors that they have negotiated a purchase that may also enhance the export efforts of their country. Letters of intent also have drawbacks. If such an agreement is later construed by the superiors to be a charade, it can seriously damage the reputation of the exporter.

Countertrade's limitations

Countertrade packages can be difficult to orchestrate because of the problems of arranging reciprocal purchases and the inflexibilities associated with the state bureaucracy in many of the countries that advocate such trade.

The reciprocal feature of these agreements is especially cumbersome because it requires in some sense a "double coincidence of wants" between the buying and selling parties. The awkwardness of doing business on a bilateral basis involving payment for goods with goods rather than money was observed by Adam Smith in his "Wealth of Nations" written in 1776. He noted that the "power of exchanging" becomes "clogged and embarrassed in its operation" when limited to a barter basis. Inherently this is the single greatest obstacle to the success of countertrade. The difficulty of locating acceptable goods to take as payment for exports can be enormous. Unsalable, out-of-date items often tend to get shuffled into countertrade. It is sometimes just as difficult to identify goods that the buyers might be willing and able to offer in countertrade as it is to identify goods that the seller is willing to purchase. Typically governments will not allow goods that are in high demand in industrialized country markets to be used as linkage items for countertrade purposes. Some firms have experienced having items that they previously had purchased to fulfill countertrade obligations suddenly disappear from the available list when the time to renew the annual contract came because that product was no longer deemed difficult to sell in hard currency markets. Delivery clauses that protect exporters when these situations arise are important ingredients in countertrade transactions.

If forced to take unwanted, inferior-quality products the exporter would have to sell them at a discount and this necessitates absorbing the discount in a surcharge in its own sales price. Given the low margins associated with many agricultural sales this could be particularly difficult unless the buying foreign trade organization made exception to its general rule of buying from the customer offering the lowest price. Foreign trade officials usually insist that they would be unwilling to pay a premium to accommodate such countertrade arrangements. Firms selling goods through countertrade arrangements do sometimes find customers willing to buy at higher prices if they take payment in kind and this should not be ruled out completely in agricultural product trade since policies are sometimes fluid over time. Nevertheless the problems for an exporter of working out an arrangement whereby it receives payment in terms of other goods are not inconsequential.

Because countertrade transactions are extremely complicated and require protracted study and negotiations before they can be promulgated an exporting firm or organization must consider whether it can afford to devote a full-time staff and resources to these activities. Furthermore, larger companies may have an edge since the costs of these marketing activities can be spread over larger volumes of sales. Another reason that larger companies may have an edge is that large government trading agencies are normally involved on the buying side where countertrade is used. While smaller firms are not precluded from successful countertrade operations they should bear these factors in mind.

Third party trading houses mentioned earlier may be a partial answer to some of the problems discussed but there are drawbacks associated with relying upon trading houses to dispose of countertrade goods. These organizations require a return for their operations that becomes one of the costs of the original sales transactions. Another problem is that in certain cases foreign agencies or governments specify that third parties cannot be used. It has been reported that involvement by trading houses is opposed at times by Eastern European buyers who want to deal directly with the principal because they harbor (mistakenly or unmistakenly) the impression that involvement of the third party increases the cost of their imports (Business International S.A., December 1979). Indonesia and other governments also require that the countertrade purchase be made on a bilateral basis. In other words, these countries insist that their goods must go to the country from which the original purchase is made. This could restrict a third party trading house's ability to sell the goods. Another drawback is that if they delegate this task to third party trading houses, the seller's own negotiators are unable to master the intricacies of countertrade and are thus perhaps less proficient in conducting negotiations.

Trading houses willing to assume obligations to dispose of countertrade goods are not necessarily easy to locate. Not all trading houses engage in countertrade as their exclusive line of business. They themselves often find it more profitable to be engaged on the sales side of their client's transactions and view the assumption of countertrade obligations as a necessary step to obtain such accounts. In such cases using trading houses as third party intermediaries is sometimes more likely to be possible where the western firm undertakes longer term commitments than on ad hoc deals.

Many of the buying organizations seeking countertrade deals are State trading bureaucracies. The rigidity and complexity often encountered in dealing with State trading bureaucracies is sometimes compounded by the fact that the buying agency and the agency providing countertrade goods are separate entities and may even be under the supervision of separate ministries. Such linkage arrangements are not uncommon in countertrade transactions and in certain cases specialized trade organizations have been set up by overseas agencies to facilitate arrangements involving more than one agency or ministry. Nevertheless to coordinate separate import/export organizations is a formidable task that can entail considerable resources and risks. In fact the actual buying officials have been known to view countertrade to be wasteful and time consuming, and barring external pressure from higher levels of authority, they themselves prefer to give lipservice only to such schemes.

Countertrade's potential to U.S. exporters

Given the emphasis that many buying countries may place upon firms to agree to countertrade it behooves exporters contemplating using this tool to be familiar with the possibilities and drawbacks associated with such arrangements. The willingness and ability to accommodate or even initiate such arrangements could present a powerful marketing strategy to gain access to that market. In certain cases countertrade capability may be mandatory.

Considering the lack of countertrading experience possessed by most U.S. agricultural exporters, new arrangements may need to be considered to facilitate countertrading. For example a farmer's cooperative organization or an export trading company could form a counterpart foreign trade organization or department for purposes of dealing specifically with goods acquired in countertrade transactions. The organization could handle direct sales, countertrade, barter, switch deals, cooperative arrangements including technical assistance, joint ventures, and other trade matters. This would allow for pooling of resources and developing of specialized trading skills to meet the unique needs of the trade and at the same time allow member cooperatives or firms to spread the high cost of acquiring the expertise and facilities needed to carry out countertrade and other trading activities. It would expedite an export-import combination that could be very useful in light of the hard currency problems and bilateral tendencies of many buyers. Such a centralized organization would perhaps also be in a better position to countervail any bargaining advantage possessed by overseas state agencies who act as centralized buyers and sellers. Agricultural groups also could consider joint ventures or associations that might be available through export trading companies as they develop under the auspices of the Export Trading Act of 1982 (Journal of Commerce, October 1982).

In summary countertrade may be a "second best solution" if hard currency payments problems or importer government mandate requires doing business this way. It offers an alternative procedure for gaining access to foreign markets, but due to the complexity and potential pitfalls of countertrade, extreme caution, planning, and managerial discretion should be exercised.

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ARE EXPORT SUBSIDIES THE ANSWER TO U.S. GRAIN SURPLUSES?

(By Jerry A. Sharples)*

Agricultural policymakers are looking for ways to bring U.S. grain production and use into better balance. The U.S. Government decided to use a large production control program in 1983 (popularly known as the PIK Program) to help reduce surplus production. That 1-year program substantially reduced grain and soybean inventories. But that was a costly 1-year solution to a longrun problem.

Some farm leaders have suggested that a better policy would be to expand use rather than control production. They advocate subsidizing exports and continuing the high price supports. They point out that the export subsidy is used successfully by the European Community to get rid of its wheat surpluses. Why can't the United States do the same? In this paper the economics of a grain export subsidy are examined. The 1983–84 wheat market situation is used to illustrate those economics.

During the fall of 1982 it became obvious that some drastic policy action was needed or else the large U.S. grain surplus would continue to grow dring the 1983–84 marketing year. Wheat production was expected to exceed domestic and export demand at the support price. Thus stocks would likely grow even larger. The actual policy response was to have a very large Payment-In-Kind [PIK] Program to reduce production in 1983.

Suppose that instead of the PIK Program, the Federal Government choose to subsidize wheat exports during 1983–84 in order to increase sales abroad. Further, suppose the goal was to increase wheat exports 300 million bushels or about 20 percent. That amount would cause total wheat consumption to exceed production and slightly draw down stocks. That amount would also about match the expected reduction in production from the PIK Program in 1983. In other words, a subsidy program of this magnitude would result in a stock drawdown similar to that of the PIK Program without having to reduce production.

For this analysis, two alternative policy scenarios are imposed hypothetically upon the 1983–84 wheat marketing year. The base scenario, used for purposes of comparison, is similar to the 1983 wheat program (price supports, deficiency payments, farmer-owned reserve) except that there is no production control—no set-aside, no paid diversion, no PIK. The alternative scenario is the same as the base case except that the wheat export subsidy is added.[1] A small economic model of the wheat market (described in the appendix) is used to evaluate the expected impact of each policy scenario. The differences in expected economic impact between the two policy scenarios is attributed to the export subsidy, and reported below.

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IMPACT OF EXPORT SUBSIDY

The key to identifying the economic impact of an export subsidy is to determine its impact upon the market price. With no PIK Program and no export subsidy during 1983–84, the wheat price at the farmgate would average near the loan rate of $3.65 per bushel. The loan and farmer-owned reserve programs would prevent the price from falling much lower. The addition of a major export subsidy program, even though it would induce an additional 300 million bushels of exports, would not push the farm price any higher. The total supply of wheat (production plus carrying stocks) would be large enough to still hold the farm price at the loan rate.

As a result of the U.S. export subsidy, the U.S. price of wheat on the world market would fall. Other wheat exporting countries would be expected to drop their export prices to compete with the subsidized U.S. price. Competition among exporters would quickly force down the level of wheat prices on the world market. With lower world prices, some exporting countries would slightly reduce exports and some importing countries would buy a little more. History shows that most countries do not make very large adjustments in wheat exports or imports in 1 year in response to a world-price change. But as a result of small adjustments made by many countries, the United States would end up exporting more wheat.

A subsidy of about $34 per ton (nearly $1 per bushel) would be needed to induce the rest of the world to absorb an additional 300 million bushels during the 1983–84 marketing year. The subsidy would have to apply to all wheat exported, not just to the additional 300 million bushels.

Thus a wheat export subsidy of $34 per ton during the 1983–84 marketing year, would not increase the farm price. It would, however, lower the price at which wheat left U.S. ports by about $34 per ton. The Government subsidy payment (cash or in-kind) would cover this loss by exporters of U.S. wheat.

Domestic impact

The export subsidy would be expected to achieve the immediate objective of expanding exports in 1983–84. But it would be costly. The U.S. Government would pay a subsidy of $0.93 for each bushel exported, or nearly $1.6 billion. That is equivalent to $5.30 for each of the additional 300 million bushels exported. The farmer would receive no direct benefits from the subsidy since the subsidy would not cause the farm price to increase. There could be some farmer benefit in later years, however, because of the reduction in wheat carryover stocks.

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[1] The U.S. Government could subsidize exports of wheat several ways. A direct cash payment could be made to exporting firms to cover the differential between the domestic and export price. This approach was used by the United States in the 1960's to move large quantities of wheat into the world market. A payment-in-kind subsidy also could be used. Exporters would receive a subsidy payment in the form of wheat (from stocks owned by the Government's Commodity Credit Corporation) rather than cash. This approach has been used by the Government to reduce CCC-owned stocks. Both methods have the same general economic impacts, but the fiscal impacts on the annual Federal budgets differ. The former is emphasized in this report.

International impact

An export subsidy of $34 per ton would have a major impact upon the world's wheat importing and exporting countries. The impact, however, would be mainly financial. The volume of wheat traded would change very little.

Other wheat exporting countries would be expected to drop their prices in order to compete with the subsidized price of the United States. The European Community subsidizes wheat exports. In the past the EC usually exported its surplus of wheat over domestic needs at whatever price was needed to move it all. Thus they would likely increase their export subsidy in 1983–84 by the amount necessary to continue to get rid of their surplus. The lower world price likely would not force them to cut back on exports. But it would force the EC to increase its export subsidy by an amount equivalent to $400 million—a direct loss to the EC and a gain for importers (table 1).

TABLE 1.—EXPECTED IMPACT OF A U.S. WHEAT EXPORT SUBSIDY ON WORLD WHEAT TRADE, FOREIGN EXCHANGE EARNINGS AND DOMESTIC WELL-BEING, 1983–84[1]

[Dollars in millions]

Countries	Expected change in: Trade volume (millions of tons)	Foreign exchange	Domestic well-being [2]
Exporters:			
United States	8	–$300	–$1,900
European Community	0	–400	–400
Other [3]	–3	–2,000	–1,500
Importers:			
Soviet Union	0	700	700
China [PRC]	1	220	350
Others	4	1,780	2,350
Total	5	2,700	3,400

[1] Assumes a $0.93 per bushel ($34.17 per ton) subsidy on all U.S. wheat exports.
[2] This is what economists call consumer and producer surplus.
[3] Canada, Argentina, and Australia.

With a lower world price Canada would be expected to decrease exports of wheat somewhat, accumulate stocks and have a small increase in domestic wheat consumption. Australia and Argentina, the other two major wheat exporting countries, would be expected to reduce the quantity exported only a small amount. In all, these three countries would decrease wheat exports about 3 million tons (6–7 percent) in response to the U.S. export subsidy.

The Soviet Union and the People's Republic of China import about one-third of all wheat traded. Based on past activity in the world wheat market, one would expect the Soviet Union to make little or no adjustment in total quantity purchased in response to the subsidized world price. Domestic considerations determine imports. China, however, might increase imports. A lower price would allow China to purchase more wheat with its very limited foreign exchange. Without the subsidized world wheat price, the Soviet Union and China would purchase about 30 million metric tons of wheat in 1983-84. The U.S. subsidy would be expected to induce only a 1-million-ton increase by China that year (table 1).

The other wheat importing countries are Japan, Eastern Europe, and a long list of developing countries. Their volume of imports tends to be determined more by domestic concerns than by world price. They would increase wheat imports only about 6 percent (4 million tons) in response to the lower world price.

To summarize, the U.S. export subsidy of $34 a ton ($0.93 a bushel) would increase U.S. wheat exports 8 million tons (300 million bushels). The world market would absorb that increase with a 3-million-ton decrease in exports by competitors and a 5-million-ton (5 percent) increase in purchases by importers.

These shifts in trade volume would be accompanied by large shifts in foreign exchange flow for some countries. As shown earlier, the United States would lose $300 million in export earnings. Reduced export prices would more than offset the increase in export volume. The European Community would lose $400 million in additional export subsidy payments. The other wheat exporting countries, in total, would lose about $2 billion in export earnings due to the combined affect of reduced sales and lower price (table 1).

The importing countries would save a total of $2.7 billion in foreign exchange—an amount equal to the losses by exporters. The Soviet Union and China would save a total of over $0.9 billion and the other importers would save about $1.8 billion.

But foreign exchange earnings do not tell the whole story about the shift in income that would take place among the wheat trading countries. Consider the United States. It not only loses $300 million in foriegn exchange. It also loses about $1.6 billion in subsidy payments. That is equivalent to a transfer payment from the United States to the wheat importing countries. Thus the wheat export subsidy has a net cost to the U.S. citizens of $1.9 billion. In Canada, Australia, and Argentina the reduction in wheat exports is not a total loss. The wheat not exported has value when consumed domestically. Thus their net loss is less than their loss of foreign exchange earnings.

Importing countries that increase their volume of imports as a result of the U.S. export subsidy, gain more than just the savings in foreign exchange. They also obtain more lower priced wheat. The net gain among all wheat importing countries is $3.4 billion. Note in table 1 that exporters lose $3.8 billion. The difference of $0.4 billion is a rough measure of the net loss to the world economy as a result of the adjustments made to the U.S. export subsidy.

Thus the U.S. wheat export subsidy would cause substantial income transfers among countries in 1983-84. The United States would suffer a large loss. The U.S. subsidy would also cause Canada, Australia, Argentina, and the European Community to suffer losses. Countries receiving this "foreign aid" would be the Soviet Union, China, Japan, and developing-country importers like Mexico, Egypt, and many others. This redistribution would appear not to be entirely consistent with other foreign policy objectives of the United States.

OTHER POLICY ALTERNATIVES

The above analysis indicates that although an export subsidy could expand the demand for U.S. wheat, there could be undesirable side-effects. It is very costly to the Federal Government. Farmers get little benefit. It tends to hurt our international friends and benefit our adversaries.

There are alternative ways of disposing of 300 million bushels of wheat. Four are briefly examined here in order to put the export subsidy into perspective. The four are (a) destroy it, (b) store it, (c) give it away, and (d) don't produce it. Each is examined in the context of the 1983 wheat crop.

Destroy it

The export subsidy cost $5.30 per bushel to get rid of 300 million bushels. The Government could save tax dollars by simply purchasing the wheat from farmers at the loan rate of $3.65 per bushel and destroying the grain. Farmers would be no worse off than with the export subsidy. The Government could save $400 to $500 million, depending upon disposal costs. The big difference would be felt on the world market. Without the export subsidy there would not be the losses by exporting countries and the gains by importers.

Store it

Destroying grain, once produced, offends common sense. Grains would appear to have value as protection against future shortages. So suppose the wheat were stored rather then either exported under subsidy or destroyed. One can only guess how long the grain would be stored until a need arose. As an example, consider 4 years. The cost to the Government of storing grain would include storage costs, interest and deterioration. The present value of 4 years of those costs would be about $3.50 to $3.75, a bushel, or equal to the cost of the grain. If the grain were needed in less than 4 years, there would be an economic gain over simply destroying the grain. The cost of storing grain could exceed its value if it were stored more than 4 years. Over the last 50 years, U.S. wheat stocks have built up and diminished at least 9 times. Most buildups lasted 4 years or less.

This option is still less costly to the Government than the export subsidy. Farmers are somewhat worse off with this option due to the future price-depressing impact of the stored grain. Importing countries are probably better off under this option because there is less chance of a future shortage.

Give it away

Wouldn't it be cheaper to give the wheat away than to either subsidize its export or store it? Besides, hungry people in the world would be helped. This has been—and still is—a major component of U.S. policy. We have learned from many years of experience that a small amount of wheat is always needed somewhere in the world to meet emergency needs. If large quantities are given away, however, they cut into commercial sales. The world market impact of giving millions of bushels away would thus be similar to the impact of an export subsidy as discussed above.

Don't produce it

This alternative was actually pursued in 1983. The actual costs of removing 300 million bushels from production are hard to figure, but they would surely fall well short of the $5.30 per bushel cost of the export subsidy. With this policy alternative the domestic producers rather than the importing countries receive the benefits of the program. Producers receive the payment for not producing plus they incur less operating expenses. The Government saves money relative to the cost of an export subsidy. Farm input suppliers, however, suffer from reduced sales. The impact on the rest of the world would be the same as if the grain were destroyed (discussed above).

But maintaining the loan rate at $3.65 and then controlling production has a major drawback—over the long run the United States will lose its wheat export market to the other wheat exporting countries. In contrast, an export subsidy would expand export markets in the long run.

IMPLICATIONS FOR FUTURE YEARS

Up to now the discussion has focused upon the 1983–84 wheat marketing year. If the same wheat export subsidy were to continue for 3 or 4 more years, other countries would make additional adjustments. Other wheat exporting countries might aggressively retaliate. Their political reaction is hard to predict. Let's assume, however, that they do not change their trade policy. Their economic adjustment over a 3- to 4-year period, with no change in policy, is easier to predict. They would be expected to reduce production and reduce exports because of the continuation of the U.S. export subsidy. Some importing countries also would reduce production and rely more on cheap wheat imports to meet domestic needs.

Thus by the third or fourth year the United States would be able to induce an additional 300 million bushels of exports each year with a smaller subsidy per bushel. The annual Treasury costs would then be less than $1.6 billion. Also, wheat export earnings would likely increase by the third or fourth year because the expansion in exports, due to the subsidy, would exceed the reduction in export price. Recall that in the first year, the subsidy would cause a decrease in wheat export earnings.

The subsidy would cause the same type of income transfers among countries in later years (though smaller) as in the first year. The United States would be a net loser while importing countries would continue to gain from the U.S. subsidy. Other exporting countries would also lose. Specifically, grain producers in those exporting countries where the domestic price was allowed to fall with the world price, would suffer from the U.S. subsidy. Consumers would benefit.

Lowering the loan rate

The reason the United States had 300 million bushels of surplus wheat at the beginning of 1983–84 was because of the price-supporting influence of the wheat loan rate. With a lower loan rate during the early 1980's, less wheat would have been produced and more wheat would have been sold at home and abroad. Thus one way to reduce the future buildup of excess U.S. wheat stocks is to lower the loan rate. But a lower loan rate means reduced earnings for today's farmers. This tradeoff between support for today's farmers and expanded export markets for tomorrow's farmers will have to be faced by policymakers as the 1985 farm bill is prepared.[1]

SUMMARY

A grain export subsidy is evaluated in the context of the surplus wheat situation during the 1983–84 marketing year. These results can be generalized to all the U.S. grain markets as well as to soybeans. An export subsidy can be an effective means for expanding U.S. grain exports and reducing domestic surpluses. But there are undesirable economic impacts. The U.S. Treasury cost is high relative to alternative policies. Grain producers receive very little of the benefits of the program. The international market is further disrupted. Retaliation by other countries could lead to a trade war among political partners of the United States such as France, Canada, Australia, and Argentina. Many developing countries would benefit from the lower-priced imports, but the export subsidy would also result in substantial income transfers from the United States and the other exporting countries to the Soviet Union, China, and Japan.

APPENDIX

This appendix contains a description of the simple wheat model used to evaluate the export subsidy. The model represents the 1983–84 marketing year as policymakers might have viewed it just prior to winter wheat planting time in the fall of 1982.

The equations of the model are presented in tables A1 and A2 and graphed in figures A1 and A2. The first step in defining the equations was to estimate the quantity and price equilibrium points for each equation assuming no wheat production control program [PIK] for the 1983 crop. The farm-lend price was assumed to be the loan rate of $3.65 per bushel. The same price was used for all domestic and foreign equations—the price at U.S. gulf ports. Thus the gulf equivalent of the loan rate, $4.35, was assumed to be the world equilibrium price. The equilibrium quantities are shown in the table A3, column 2.

The second step was to estimate slopes for each of the linear equations. These were computed from the assumed elasticities at equilibrium, shown in the right column in tables A1 and A2. The elasticities are based upon Sharples, 1982. The elasticities of excess supply and excess demand for the various regions of the world were specified to yield a short run elasticity of excess demand faced by the United States of -1.0.[1] Once the equilibrium price-quantity points and the slopes were defined, the equations could be specified.

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[1] A more complete discussion of this tradeoff may be found in Sharples, Webb, and Holland.

The model contains many assumptions in order to simplify the analysis. Among the more important; one world price as specified at U.S. gulf ports, no transportation costs, all trade denominated in dollars, competitive pricing strategies by all traders, no interaction with other grains, all wheat is homogeneous, et cetera.

The export subisdy is introduced into the model by shfting the U.S. excess supply equation such that an additional 300 million bushels are exported. This requires a decrease in price of $0.93 per bushel or $34.17 per ton. The shift is shown as XS′ in figure A1.

TABLE A1.—DESCRIPTION OF U.S. WHEAT MODEL

Item	Equation [1]	Price elasticity at $P=4.35$ [2]
Beginning stocks	$B=1540$	0
Production	$Q=2160.6+124P$	0.20
Supply	$S=3700.6+124P$	.13
Domestic use	$U=1555.9-95.6P$	$-.40$
Ending stocks ($P>4.35$)	$E=1800-137.9P$	
Excess supply ($P>4.35$)	$XS=344.7+357.5P$	
Subsidized excess supply ($P>3.42$)	$XS'=77.2+357.5P$	
Excess (export) demand [3]	$XD=2800-321.8P$	-1.0

[1] P is border price in dollars per bushel. All quantities are in million bushel units.
[2] At $P=4.35$ the model is in equilibrium.
[3] Obtained from table A2 and converted to domestic units.

TABLE A2.—DESCRIPTION OF REGIONAL COMPONENTS OF U.S. EXCESS DEMAND

Description	Equation [1]	Price elasticity at $P'=160$ [2]
Exporters' excess supply:		
European community	$E_C=12.0$	0
Other exporters	$OX=32.20+.086P'$	0.3
Importers' excess demand:		
Soviet Union	$SU=20.0$	0
People's Republic of China	$PR=14.66-.029P'$	$-.5$
Other importers	$OI=84.64-.117P'$	$-.3$
Excess demand faced by United States:		
	$XD'=SU+PR+OI-EC-OX$	
	$XD'=75.1-.232P'$	-1.0

[1] P′ is world price in dollars per metric ton. All quantities are in million metric ton units.
[2] With $P'=160$ the model is in equilibrium.

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[1] This is more elastic than generally accepted by economists. The higher elasticity was used to give the exporting-increasing impact of the subsidy the benefit of the doubt. If an elasticity of excess demand faced by the United States of, say, -0.6 were used, the subsidy cost per bushel of additional exports would be much larger.

TABLE A3.—SUPPLY, DEMAND AND TRADE OF WHEAT, ACTUAL AND TWO MODEL ALTERNATIVES, 1983/84

Item subsidy	Actual [1]	Model solutions	
		No export [2] subsidy	Export [3]
	Millions of bushels		
United States:			
Beginning stocks	1,541	1,540	1,540
Production	2,425	2,700	2,700
Supply	3,969	4,240	4,240
Domestic use	1,155	1,140	1,140
Exports	1,400	1,400	1,700
Ending stocks	1,414	1,700	1,400
Demand	3,969	4,240	4,240
	Millions of tons		
Exports: [4]			
United States	38	38	46
European Community	12	12	12
Other exporters	46	46	43
Total	96	96	101
Imports: [4]			
Soviet Union	20	20	20
China [PRC]	10	10	11
Other importers	66	66	70
Total	96	96	101

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[1] USDA estimates April 1984.

[2] Assumes no production control or export subsidy.

[3] Assumes a $0.93/bushel ($34/ton) subsidy on all U.S. exports.

[4] Net trade by each region/country.

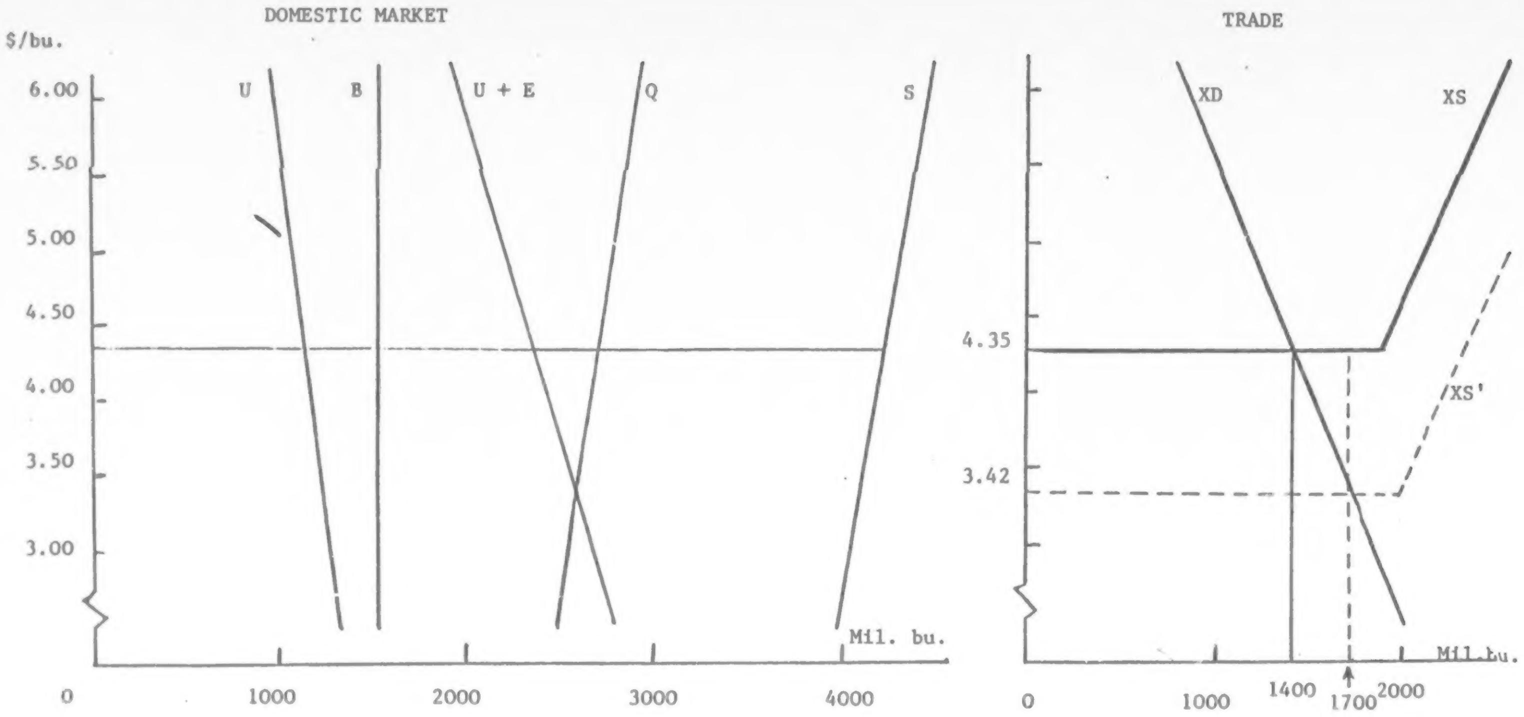

Figure A1. Impact of export subsidy on U.S. wheat market, 1983/84 example.

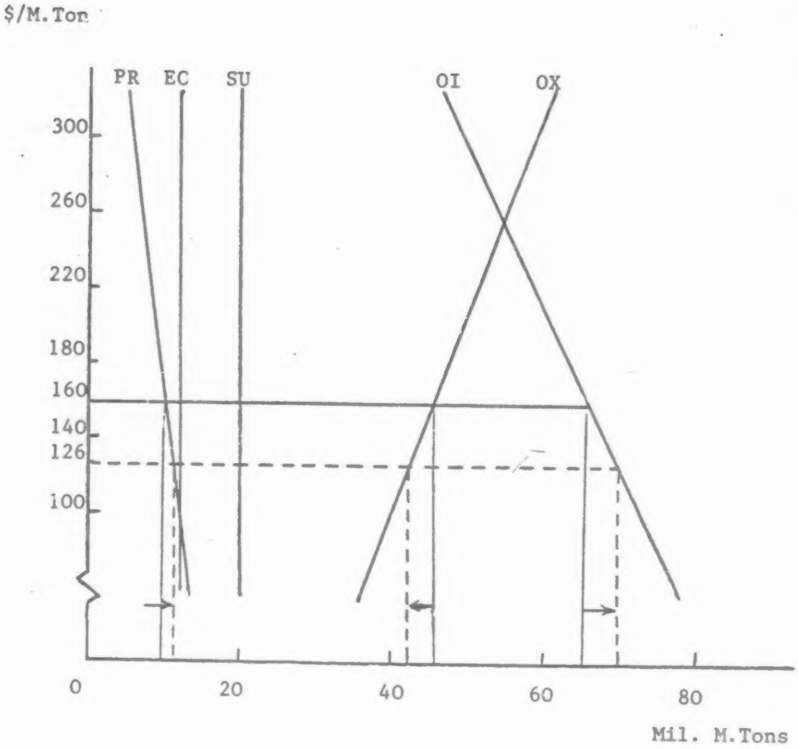

Figure A2. Impact of U.S. export subsidy on world wheat trade, 1983/84 example.

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INCREASING THE PAYOFF ON AGRICULTURAL EXPORTS: U.S. HVP OPPORTUNITIES IN THE 1980's AND 1990's [1]

(By Patrick M. O'Brien, Economic Research Service, U.S. Department of Agriculture)

SUMMARY

The unprecedented export gains the United States made during the 1970's in bulk products, such as grains and oilseeds, tended to distract attention from the rapidly emerging world market for higher valued, generally processed farm products. Although starting from a smaller base, world trade in high-value farm products [HVP's] grew rapidly enough over the 1970's to equal and ultimately exceed trade in low-value farm products [LVP's] that traditionally dominated the market. By 1980, almost 55 percent of the world's $230 billion in agricultural trade was made up of HVP's, compared with 45 percent a decade earlier. Moreover, trade in HVP's continued to grow, albeit at a slower pace, in the 1970's in sharp contrast to recession-related reversals in world LVP trade.

While U.S. LVP exports increased sharply during the 1970's from less than a quarter to over half of the bulk products traded worldwide, the U.S. share of HVP trade stagnated at 9 to 10 percent of the market. In a world market shifting toward trade in processed products, U.S. exports remained heavily concentrated in bulk, unprocessed products. This difference in commodity composition accounts for the apparent contradiction between the U.S. sharp gains in world market share measured in volume terms but stagnation measured in value terms. The U.S. volume share of world trade in farm products doubled from 20 percent in 1970 to 39 percent in 1980, but the U.S. share measured in value terms stagnated at 16–18 percent.

Other agricultural exporters, particularly the European Community [EC], were quick to recognize the advantages involved in producing HVP's for export. The value added—and in turn the economic activity and employment—involved in producing HVP's has proven in many cases to be several times greater than involved in producing the inputs used in their processing. Several of the largest HVP competitors adopted aggressive export promotion programs, often including export subsidies, to expand their HVP sales and increase export-related employment and economic activity. In many cases, the use of export subsidies allowed aggressive traders to undercut prices for similar but unsubsidized products available from lower cost suppliers such as the United States.

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[1] This paper summarizes a study entitled "High Value Agricultural Exports: U.S. Opportunities in the 1980's" published by the Economic Research Service, USDA in December 1983.

The rebound in growth in HVP trade likely in the second half of the 1980's with economic recovery could provide the United States with an opportunity to modify the mix of products it exports to take greater advantage of HVP employment and GNP payoffs. While a return to the 15 to 20 percent per year growth of the 1970's is not likely, trade in HVP's could pick up from the 2 to 6 percent annual increases experienced so far in the 1980's to 8 to 10 percent per year with diet upgrading and diversification efforts in an expanding circle of affluent countries. Given this import demand potential, more aggressive marketing could put the United States in a position to possibly double its HVP sales abroad by 1990 and raise its share of the world market from 10 to possibly 15 percent without sacrificing leadership in the LVP market.

Most of the U.S. export marketing programs necessary to capitalize on HVP trade opportunities and U.S. cost advantages are already in place and have been used successfully to expand LVP exports. With some redirection and additional funding, these programs could increase U.S. HVP sales abroad by 1990, as much as $10 billion more than the $20-$25 billion likely with a constant U.S. market share. This increase in U.S. HVP exports could generate $20 to $30 billion in added GNP and an additional 500,000 jobs.

In order to be successful, however, an expanded U.S. export promotion program would have to be reinforced by multilateral trade liberalization efforts to ease import restrictions on HVP's and to eliminate, or at least limit, the use of unfair trade practices, such as export subsidization by competitor suppliers. Without this combination of more aggressive U.S. marketing and increased pressure for trade policy liberalization, the United States could find itself hard-pressed to maintain its current share of the HVP market. Given the payoffs involved in exporting even subsidized HVP's, the supplies of HVP's available on the world market should be ample—even abundant—relative to growth in import demand and competition among exporters is likely to remain keen.

Changing world and U.S. trade patterns in the 1970's

Two distinct world markets for farm products emerged during the 1970's—the traditional market for bulk, low-value products, such as grains and oilseeds, and a market for high-value, generally processed products. Increased affluence and growth in population over the 1970's in a wide circle of countries generated strong increases in demand for basic food and feedstuffs—increases in demand that many of these countries could not supply locally. The resulting growth in import demand was particularly strong for wheat, corn, and oilseeds and products. The United States with its ready supply of low-priced bulk products succeeded in capturing almost two-thirds of the expansion in this segment of the world market.

Meanwhile, increased affluence in a smaller circle of developed and middle-income countries and upper income groups in poor countries generated strong demand for higher value farm products. Included among the products in this second group were highly processed, often consumer-ready items to upgrade and diversify diets, semiprocessed products for use in the local production of highly processed products, and unprocessed but high-value items often not available locally or seasonal in nature. This growth in demand was fast enough (particularly in the newly affluent countries, and for products initially considered luxury items) to outpace growth in local production and processing capacity. The result was a significant increase in HVP import demand in the developed countries and a veritable explosion in HVP demand in the middle-income countries (figure 1). Import demand increased most rapdily for meat, dairy products, beverages, and other food preparations.

This increase in HVP import demand was filled in large part by the EC and by a few other generally developed countries with an established processing infrastructure and excess capacity. Despite its considerable cost advantage in producing bulk products and efficiency in processing, however, the United States was hard pressed to maintain its 10-percent share of the HVP market (figure 2).

The result of these U.S. and world HVP and LVP trade developments was a dramatic shift of the U.S. position in the market. If measured in volume terms, the U.S. share of world agricultural exports increased substantially over the 1970's and into the 1980's. Almost two-fifths of all the farm products traded in the world now originate in the United States, compared with one-fifth in 1970 (table 1). Measured in value terms, however, the U.S. share of world agricultural trade stagnated at about one-sixth.

These same developments—U.S. concentration in LVP's in a world market moving toward HVP's—were reflected even more graphcially in changes in U.S. and world export unit values over the 1970's. The average price the United States received for its farm exports doubled over the decade, but fell from two-thirds of the world average in 1970 to less than half in 1980 (table 1). U.S. export prices fell even more sharply if compared with the tripling and quadrupling in export prices enjoyed by other exporters, particularly HVP-oriented exporters like the EC.

HVP-LVP market characteristics

Differences between HVP's and LVP's extend beyond commodity composition to questions regarding sources of growth in the two markets, stability, and value added.

Sources of growth have differed markedly between the two markets and U.S. exports have tended to reflect the characteristics of the LVP rather than the HVP market. Growth in the value of U.S. farm exports over the 1970's and into the early 1980's, like that of LVP exports in general, was due almost equally to gains in export volume and gains in unit prices. LVP trade volume increased 7–9 percent per year while LVP prices rose 8–9 percent. Gains in HVP trade in contrast, were due to a far greater extent to gains in prices. HVP export volume gains averaged less than 6 percent while price gains averaged 10–14 percent per year. Given the 9-percent pace of inflation experienced over this same period, the real price the United States received for its farm products declined by 1–2 percent per year while real HVP prices increased by 2–3 percent per year. Information on trade flows for the early 1980's suggest even wider differences between rising real HVP prices and declining real, in some cases nominal, LVP prices.

Growth in the LVP half of the market has also been less stable than growth in the HVP half. Interannual fluctuations in LVP trade volume and prices in the 1970's were several times greater than the swings experienced in HVP trade. Moreover, LVP instability increased significantly in the 1980's in contrast to the relatively small increase in volatility experienced in the HVP market. This LVP tendency toward wider movements in prices and quantities trade from year-to-year has tended to increase instability in domestic U.S. commodity prices and farm returns.

Equally important, the concentration of U.S. exports in the LVP market has tended to minimize the positive effects farm exports have had on economic activity outside the farm sector. In the simplest terms, HVP exports involve selling both a product and a service—a service that tends to be capital- and labor-intensive and involves a wide range of activities throughout the economy. LVP exports, on the other hand, involve exporting a bulk product with relatively little value added and affecting few areas of the economy outside of agriculture.

The feedstuff and wheat examples shown in figures 3 and 4 make this economic activity and employment payoff point graphically. The concentration of U.S. agricultural exports near the bottom of the food grain and feedstuffs processing line has meant that the employment associated with wheat and feedstuff exports are 25-50 percent of what they could be with more balanced shipments of bulk, semiprocessed, and highly processed products—an export basket, incidentally, more representative of the mix of products produced and consumed domestically in the United States. The loss in economic activity was even larger; the concentration on bulk exports limited the U.S. GNP associated with farm trade to less than half that enjoyed by countries with a more balanced mix of exports.

TABLE 1.—U.S. AGRICULTURAL EXPORT PERFORMANCE INDICATORS

Item	Unit	1969-71 average	1979-81 average
U.S. share of world agricultural exports:			
By volume	Percent	20	39
By value	Dollar	15	18
Agricultural export unit values:			
World average	Dollar	190	530
U.S. average	Dollar	125	260
Interannual variability [1]:			
World trade volume	Percent	3	4
World trade value	Dollar	5	8
U.S. trade volume	Dollar	8	9
U.S. trade value	Dollar	9	14

[1] Measured as the standard error of the regression from time series regression analyses of data for the 1960's and 1970's. The percentages shown here are shown as proxie measures of volatility; i.e., how likely market prices and quantities are to fluctuate from year to year.

Source: FAO Trade Yearbooks, 1975-81 issues, "Foreign Agricultural Trade of the United States," Economic Research Service, U.S. Department of Agriculture, various issues; and ERS estimates.

The stagnation in farm trade experienced since 1981 emphasizes the differences between the HVP and LVP markets and the cost of U.S. concentration in the LVP market. With both prices and volume off in the world LVP market, U.S. agricultural trade has fallen more than 20 million tons and $6 billion from the peak reached in 1981. With prices and trade volume increasing slowly in the HVP market, exporters concentrating in the high-volume market have been able to maintain—in some cases expand—their agricultural exports from the records set at the start of the decade.

Trade policies and HVP market share

The HVP export patterns that emerged over the 1970's were due as much to the policies and programs in place in the major importing and exporting countries as to supply, demand, or price pressures. The aggressive HVP export promotion and subisdy programs of other countries, particularly the EC, helped to neutralize the U.S. advantage in producing high-quality, low-cost inputs and processing efficiencies, and to limit the U.S. share of the market to 9 to 10 percent. Most U.S. trade programs in operation over the decade also concentrated in expanding bulk farm exports, leaving much of the HVP market uncontested. Efforts at expanding U.S. HVP exports date largely to the early 1980's and unfortunately have coincided with the recession-related slowdown in the market since 1981. Moreover, aggressive HVP marketing by other countries, combined with the U.S. emphasis on the LVP market, tended not only to slow U.S. growth in HVP exports, but also to concentrate the HVP sales made in the semiprocessed rather than highly processed categories.

U.S. HVP export opportunities in the 1980's

Many of the factors that generated growth in HVP trade in the 1970's appear likely to continue in the 1980's, particularly in the second half of the decade and into the 1990's, with economic recovery and financial stability. However, growth in HVP import demand is likely to slow somewhat from the 15 to 20 percent pace of the last 10 years to possibly 8 to 10 percent per year. Per capita HVP consumption in several of the largest developed country markets is approaching saturation levels. Many other developed and newly affluent developing countries are also investing in expanding their local HVP production and processing capacities. It was this lack of local processing capacity in many of the fastest-growing developing countries, as well as further diet diversification in the developed countries, that fueled the HVP import growth of the 1970's.

The HVP sector is still likely, however, to dominate growth in trade in farm products as efforts to upgrade and diversify diets continue and as the capital—and technology-intensive nature of HVP processing keeps many countries and affluent groups within low-income countries dependent on imports. Hence, even with the pace of growth slowed, annual increases in HVP trade could range from $10 to $15 million per year early in the 1990's.

The product composition of world HVP import demand in the second half of the 1980's and the early 1990's is likely to be such that at least 9 to 10 percent of world import demand will continue to be supplied by the United States. The U.S. cost advantage in producing and marketing many semiprocessed products has proven difficult for other HVP exporters to overcome, even with large subsidies. But for the United States to expand its share or shift its HVP exports further up the procesisng line, it will need to adopt a more aggressive marketing strategy to interest foreign consumers in U.S.-produced HVP's and to interest U.S. producers in foreign HVP sales.

In the extremely competitive environment likely over the next decade, the United States will also have to increase trade policy pressure to contain, hopefully reduce, the export subsidy and import restrictions at work to slow growth in HVP demand and displace U.S. HVP sales.

An effective U.S. HVP marketing initiative would include refocusing and expanding several existing trade programs and developing several new, uniquely HVP trade programs as well. Among the existing programs to be refocused and expanded are the Export Cooperator Program, the Public Law 480 Program, the Commodity Credit Corporation's Export Credit Program, and the foreign agricultural information programs. All of these programs have been used successfully over the last two decades to expand U.S. exports of bulk products such as grains, oilseeds, and cotton. They have not, however, provided much support for expanding U.S. HVP exports except for a narrow range of semiprocessed products such as flour and vegetable oils. All four programs can redirect part of their efforts to promote U.S. HVP sales. But substantially more funding would be needed to maintain the U.S. competitive edge in the LVP market while improving the U.S. position in the HVP arena.

The world HVP market is different enough from the LVP market that several added initiatives could improve the U.S. standing in the market significantly and enhance the effectiveness of existing programs. Included among these initiatives are efforts to increase U.S. suppliers' awareness of and interest in the world HVP market. The basket of farm products currently being exported by the United States is not representative of the basket of products produced for domestic use. Much of the HVP trade growth of the 1970's ultimately was due to foreign imitation of U.S. HVP consumption patterns. Many U.S. producers involved in the farm export trade have not fully recognized the similarity in demand patterns and the opportunities for applying domestic HVP marketing techniques abroad. Hence, an educational effort in the United States to promote processing for export, and possibly support for initial HVP export marketing efforts, could pay high dividends.

This effort to interest U.S. HVP producers in marketing their products abroad could also include attempts to popularize HVP trading companies and to involve cooperatives in the trade. The Japanese, and more recently the Brazilians, have successfully used national marketing and trading companies and cooperatives to serve as intermediaries facilitating trade. Their knowledge of foreign demand, their home country's supply, and the mechanics of trade enable these companies both to expand and to shape the commodity composition of trade in farm products. Given the large number of diverse U.S. HVP processors in the United States with a potential stake in the export, market but with limited foreign marketing experience, the role for such companies in expanding and shaping U.S. HVP exports could be considerable.

Given the extensive HVP marketing programs used by many of the other HVP exporters to expand their share of the market, any significant improvement in the U.S. position won through more aggressive marketing could be offset with a relatively small increase in foreign export subsidies. Hence, the gains made by more aggressive HVP marketing would be vulnerable unless accompanied by trade negotiation efforts to limit, hopefully reverse, questionable trade practices by other exporters and many importers.

The trade policy efforts likely to be most successful in advancing U.S. HVP export interests include both pressure for policy reform in international forums, such as the General Agreement on Tariffs and Trade [GATT] and the use of strategic marketing initiatives. Strategic marketing initiatives, possibly occassional use of export credit or subsidies to win an HVP market, would stop short of a costly all-out trade war but would demonstrate U.S. interest in resolving the problem. Strategic use of export subsidies would be concentrated in commodity markets where the United States has the greatest leverage and the least exposure, that is, markets where the cost of a subsidy to the United States would be small due to the small volume the U.S. exports, but where the cost of countering the subsidy to the other exporter would be significant because of their larger export volume.

Pressure for trade policy reform would take the form of complaints under the Trade Agreements Act of 1979 and grievances under the GATT and its Code on Subsidies. It would also, however, include pressure to liberalize trade policy in whatever forums were available to the United States.

The ultimate goal of a more equitable sharing of the world market is likely to be served best by combining reform pressures and strategic sales initiatives with a broader HVP marketing program including emphasis on quality control, tailoring products to meet importer specification, and increasing U.S. HVP processors' awareness of HVP export opportunities.

The cost of these marketing and policy initiatives is large enough to raise questions about their payoff. Given the employment and GNP associated with HVP production and trade, however, the payoff would be significant. For example, expanding the U.S. share of the world HVP market from 10 to 15 percent, by 1990 could mean 500,000 more jobs, $20 to $30 billion more economic activity, and $2 to $3 billion more in Government revenue per year by 1990.

In closing, it is important to note that implementing such a HVP export expansion program would not mean that the United States would abandon its position as the major world supplier of bulk farm products. Rather, it would involve changing the export product mix over time to maximize the return from exports for both the agricultural sector and the rest of the economy.

Figure 1

World Trade in Agricultural Products

Total and High-Value Products

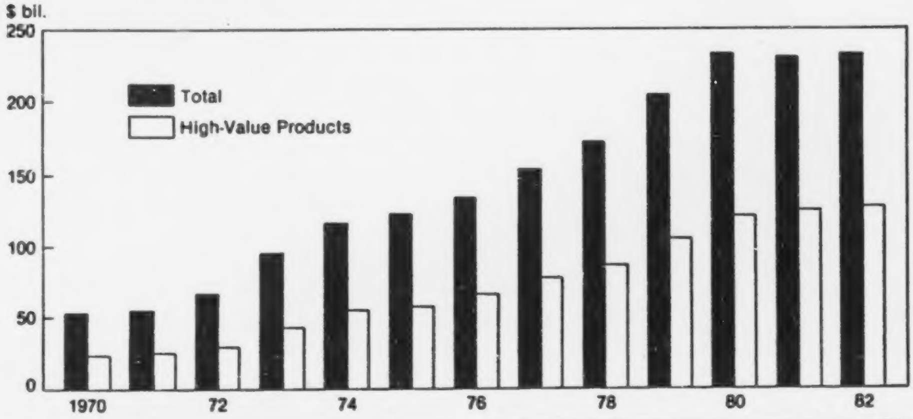


Figure 2

U.S. Trade in Agricultural Products

Total and High-Value Products

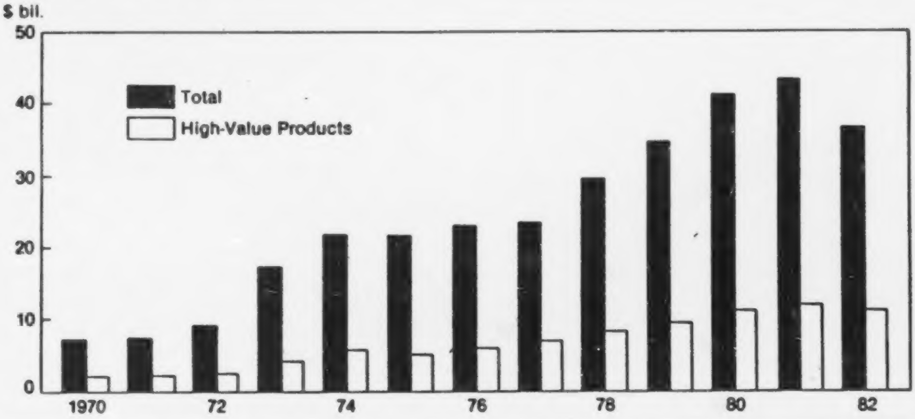
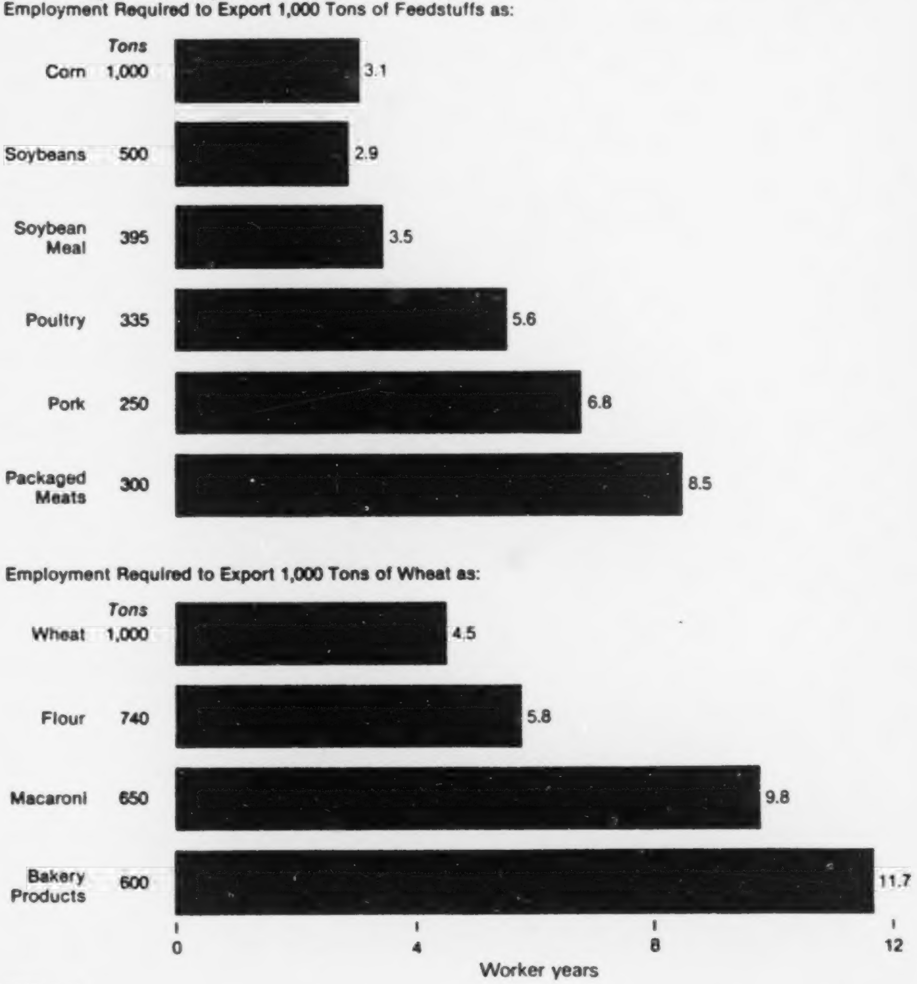


Figure 3

Labor Required to Export Selected Farm Products

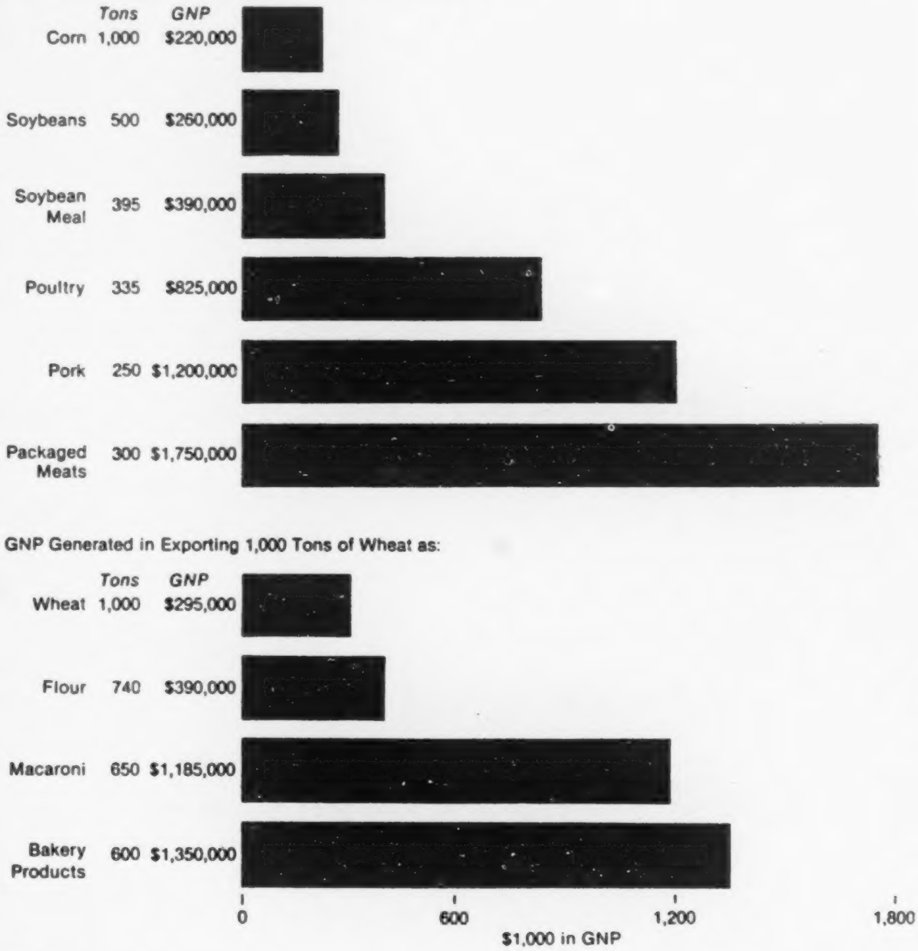


(1980 data)

Figure 4

GNP Generated in Exporting Selected Farm Products

GNP Generated in Exporting 1,000 Tons of Feedstuffs as:



(1980 data)

NONTARIFF BARRIERS: NEW TYPES OF AGRICULTURAL PROTECTION

(By Jimmye S. Hillman)*

During the past several decades many new forms of protection have arisen on the international scene, one result being that agricultural trade negotiations have become increasingly complex. Ten years ago the United States passed a significant piece of trade legislation—the U.S. Trade Act of 1974. There followed the so-called Tokyo round of trade negotiations where it soon became evident that there were different forces at work, different players, and different policy issues as compared to the other "rounds" of bargaining since World War II. The theme of my paper is that this "new situation" is due in large part to nontariff trade barriers [NTB's], originating principally because of new technologies; and from administrative bureaucracies, which have made commercial problems of the mid-to-late 20th century unique.

Nontariff barrier problems, along with agricultural policy issues, were pushed into the background during earlier negotiations. There was an initial underestimation of the nature and level of the ultimate significance of such barriers to the countries involved. Moreover, during the 1960's a common agricultural policy for the European Community [EC] was being evolved. Not until more recent years did the real importance of the nontariff barrier issue become manifest. The agricultural sector with its many difficulties and issues affecting nontariff barriers has now emerged on the world trade scene as a real problem child. This is particularly evident as we plan for a U.S. Food and Agriculture Act of 1985.

Nontariff trade barriers gained prominence in the late 1960's and early 1970's and numerous studies were carried out about this time. Despite the recognition of the importance of NTB's as a major restrictive practice being applied by most, if not all nations, their proliferation was not abated but in fact increased, especially in the late 1970's and early 1980's during the global economic recession. The problem of NTB's has virtually been the same since they were first applied, only recently research and studies have given us much needed insight into the "how and wherefor" of their application by governments and some of the results and consequences that have become apparent such as: NTB's act as selective embargos—chickenwar; create abnormal profits that attract illegal elements—kangeroo meat scandal; entice covert trade.

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Agricultural protection and nontariff barriers are now being recognized as key subjects in broad areas of trade negotiations that are so necessary to policy formulation, decisionmaking, and adjustment. They can be pushed aside in future negotiations and ignored only at the risk of trade breakdown.

Let me hurry to say that nontariff barriers have been difficult to identify, rationalize, and negotiate by those dealing in the affairs of world trade. Moreover, there is a tendency for negotiators on trade problems to deal principally with policies related to tariffs, prices, and other quantitative indicators, and to leave in abeyance the more abstract and complex questions, even though these questions might be identified with some of the fundamental issues in trade liberalization. Be that as it may, international trade in agricultural products is of great importance to the world, and though it is beset by many problems of a nontariff nature, an attempt must be made to push understanding a bit further.

ADMINISTRATIVE PROTECTIONISM

Accompanying the relative decline of tariffs and other direct forms of protectionism during the past 40 years has been the dramatic rise of an indirect, or administrative, protectionism, most of which has had a symbiotic relationship with nontariff laws and regulations. The passing of power from legislative to administrative forms of government has resulted in increasing opportunism in policy making and interpretation and has rendered it necessary for decisions to be made more quickly and in more complicated detail. One has but to observe the decisionmaking possibilities in the Foreign Agricultural Service [FAS] of the U.S. Department of Agriculture [USDA] or in the European Common Agricultural Policy [CAP] at Brussels to appreciate the strategic position of certain administrators. In such situations, what pressures are actually effective in making and interpreting policy? Who has the ear of those who must take action? Whose judgment and advice is used? How far are decisions based upon practical considerations concerning which responsible officials have, if not full, at least the best, information available? Do they tend to consult experts who must almost necessarily be individuals with a direct personal interest in the decision to be taken? Are the administrators more or less open to the pressure of vested interests when their actions are further removed from public review?

These questions defy clear and decisive answers but certain generalizations can be made. First, however high-minded and able the administrators who conduct day-to-day policy, there is a real danger in their progressive withdrawal from direct and detailed public criticism and responsibility. Those who would question this should go into the burrows of officialdom and try to pinpoint who really is responsible for decisions and their implementation with respect to the United States under section 22 of the Agricultural Adjustment Act, also for the compensatory policy in the European community, and so on. The real dange is not so much graft and corruption, but, more subtly, in the concentration of power among those who are not subject to public action and whose cumulative errors in judgment are not brought into immediate account.

A second fact appears clear from recent experience. The concentration of policymaking power among administrators puts a premium upon organized pressures from directly interested groups and lessens the consideration likely to be given to the general public interest, particularly unorganized consumer interest. A good case in point is the action of the Florida tomato growers who successfully lobbyed Captiol Hill to pass legislation that modified the flow of tomato exports from Mexico. This, of course, is not unique to agriculture. In the case of agriculture, the result is that Government policy and regulation in the area of nontariff barriers has been dominated historically by organized producers. Agricultural marketing schemes, export programs, and regulatory activities are in many cases directly accountable to farming interests. The various international commodity control programs set up to regulate production, trade, and prices are primarily designed to protect the financial structure of existing investments, even at the expense of new investment opportunities in areas of developing production.

Administrative devices used to restrict trade range from the imposition of fees and the selective issuing of licenses to the use of regulatory measures such as veterinary, health, quarantine, and similar restrictions imposed for specific purposes; or merely to the literal application of wide powers taken by governments to ensure adequate inspection, classification, statistical recording, allocation of quotas, or valuation of imports. Since there is a well recognized procedure of judicial interpretation and appeal in most countries, estimate of the effectiveness of these laws and regulations ought to be made by investigation of the actual administrative practices followed in each country rather than by analyses of the powers granted by legislation.

Suffice it to say that in recent years in the case of quantitative restrictions—quotas, license fees, exchange controls, and the like—it has been possible to pinpoint rapidly the most dsicriminatory practices, whereas the interpretative norms for certain regulatory activities are difficult to discover. As one European agricultural official reported, "Honestly, it depends on the price of ——— as to how rigorously I apply this particular regulation." In sum, the administrative aspect of protection is many times more important than the essence of law and regulations.

TAXONOMY OF NONTARIFF BARRIERS

In recent years, there have been various attempts to identify, classify, and tabularize in some quantitative sense governmental measures which affect agricultural production, imports, and exports. The basic inventory performed by GATT (Patterson) after the Kennedy round consisted of more than 800 items, agricultural and nonagricultural; but other agencies, such as the USDA, have done subclassificatory and identification work, as will become evident later. Not all protection techniques involve import-restricting measures. Some export-increasing and export-restricting schemes have been added to, or combined with, import nontariff interferences. In the agricultural field, the GATT classification process was not limited to measures taken at national borders, since domestic programs, most of which relate to production and supply, often have a powerful effect on possibilities of market access by foreign distributors. The items were arranged in five general categories: Section 1. Government participation in trade, including (a) production subsidies, (b) export subsidies, (c) countervailing duties, (d) government procurement and restrictive business and union practices, (e) state-trading enterprises in market-economy countries, and (f) governmental and quasi-governmental promotional bodies. Section 2. Customs and administrative entry procedures, including (a) customs valuation, (b) antidumping practices, (c) customs classification, and (d) formalities connected with importation. Section 3. Industrial, health, and safety standards, and packaging, labelling, and marking regulations. Section 4. Specific limitations on imports and exports, including (a) licensing arrangements, (b) quantitative restrictions including embargoes, (c) bilateral agreements, (d) voluntary restraints, (e) motion picture restrictions, (f) promotional restrictions, and (g) minimum prices on textile imports. Section 5. Restraints on imports and exports by the price mechanism, including (a) prior deposits, (b) administrative and statistical duties, (c) restrictions on foreign wines and spirits, (d) discriminatory taxes on motor cars, (e) special duties on imports, (f) credit restrictions for importers, (g) variable levies, and (h) border taxes.

NONTARIFF BARRIER CLASSIFICATION IN SELECTED COUNTRIES

An agricultural committee was set up in GATT after the Kennedy round to search for mutually acceptable solutions to nontariff barriers in both agriculture and other industries. All along, agricultural problems and nontariff barriers within the agricultural sector had been underestimated by most negotiators as a source of trade conflict. This became even more evident as each country defended special features of its agriculture in the committee discussions aimed at progress toward trade liberalization.

The GATT agricultural committee encountered many difficulties in carrying out its task. Documentation and problem identification took more than 2 years, during which time the basic inventory was made of measures affecting agricultural imports (including processed products) of major trading countries. That inventory included tariffs, quantitative restrictions, variable levies and other special charges, health and sanitary regulations, and various other nontariff barriers to trade. The inventorying and cross-classification involved a vast amount of time and paperwork, as any visitor to the GATT offices can testify. The inventory is kept up-to-date and could, during the future trade negotiations, provide a concrete basis for progress in trade liberalization.

In the case of import restrictions, detailed summaries of data prepared by GATT cover those countries for which information on all types of restrictive measures are available. In the case of tariffs, the information is presented in the form of four ad valorem incidences for each country and for each Brussels Nomenclature heading. In the case of quantitative restrictions (including centralized trading), summaries indicate the type of restrictions in force. For variable levies and other special changes, summaries show for each country, and for each four figure heading, the simple and weighted averages of the incidences. In the case of health and sanitary regulations, a succinct tabulation has been constructed with extensive notes as to country and regulation.

Out of these vast and detailed summaries one is able to derive import restrictions by country and general product category. Such a classification has been prepared in the GATT for nontariff restrictions. Quantitative barriers and related licensing procedures dominate and vary from country to country. For example, in the dairy products category, only a few countries out of the many listed do not report some form of quantitative restriction or licensing. And, of these few countries, health regulations, state trading, or other nontariff barriers are reported in most. Other nontariff barriers may be generally observed by studying the summaries.

Even though no attempt is made in GATT to interpret the results of the original classifications and summaries and other such subsummaries, the reduced form of these materials assists one in appreciating the nature and location of certain import restrictions. In fact, GATT warns repeatedly of the danger of assessing degrees of protection from the "raw" classification. For example, it is often impossible to make a direct comparison between the ad valorem incidence of tariffs and variable levies. The protective effect of a tariff of 30 percent ad valorem is, for example, not necessarily the same as the protective effect of a variable levy with an ad valorem equivalent of 30 percent. In any case, a straight comparison of the ad valorem equivalents of tariffs and levies in various countries is not significant, because the levy is usually the only protective device used at the frontier, whereas tariffs are often reinforced by quantitative restrictions.

This fact is brought out in GATT tabulations, which also deal with quantitative restrictions. Another point to be borne in mind is that the type of quantitative restriction and variable levy used in different countries varies considerably. In practice, levies are varied frequently, in some cases, and effectively equalize internal and world market prices. The fact that two types of levy have the same ad valorem incidence would not necessarily mean that they have the same effect.

Table 1 demonstrates a way of presenting the extent and general nature of nontariff barriers applying to imports of agricultural and other primary commodities for the leading industrial countries. This table, adapted from the United Nations Conference on Trade and Development [UNCTAD] material, involves not only an explanation of the general nature of the restraint at country borders but also certain types of explicit government intervention in domestic markets.

Table 1. Nontariff Measures Facing Agricultural Exports to the EEC, Japan and Sweden

Product (CCCN)	Type of Nontariff Measures applied[a]			Coverage ratio[b]		
	EEC	Japan	Sweden	EEC	Japan	Sweden
Vegetable oils						
Soya bean oil (ex. 1507)		HS	V	0	100	100
Ground-nut oil (ex. 1507)		HS	V	0	100	100
Rape-seed oil (ex. 1507)		HS	V	0	100	100
Cotton-seed oil (ex. 1507)		HS	V	0	100	100
Coconut oil (ex. 1507)		HS	V	0	100	100
Palm oil (ex. 1507)		HS	V	0	100	100
Palm kernel oil (ex. 1507)		HS	V	0	100	100
Vegetables						
Fresh or chilled vegetables (0701)	BQ,GQ,HS,OM,SR	HS	SR,V	100	100	90
Frozen vegetables (0702)		HS		0	100	0
Vegetables in brine (0703)		HS		0	100	0
Dried vegetables (0704)	BQ,Q,MP	HS		100	100	0
Dried legumes (0705)		HS,DL,Q	V	0	100	75
Fruits						
Tropical fruit (0801)	Q,GQ,BQ,HS,OM	HS		43	100	0
Citrus fruit (0802)	HS,PHS,OM,GQ	HS,DL,Q	HS	100	100	80
Figs (0803)	HS	HS		100	100	0
Grapes (0804)	HS,SR,OM,DL	HS	HS,SR	100	100	100
Nuts (0805)	HS	HS,Q		14	100	0
Apples and pears (0806)	HS,OM	HS	L,HS,SR	100	100	100
Stone fruit	HS,SR	HS	HS,R,SR	100	100	100
Berries (0808)	L,HS	HS	SR	100	100	63
Meat						
Bovine animals (0102)	L,HS,PHS,OM,V	HS,Q	L,V,HS	100	80	100
Swine (0103)	V	HS	L,V,HS	100	100	100
Sheep (0104)	L,GQ,PHS,MP,OM	HS	L,V	100	100	50
Poultry (0105)	PHS,HS,OM,V	HS	HS,V	100	100	100
Fresh meat (0201)	DL,HS,LH,PHS,OM,V	HS,DL,Q	HS,V,L	100	100	100
Poultry meat (0202)	MP,OM,V,PHS	HS	HS,V	100	100	100
Poultry liver (0203)	PHS,V,HS	HS	HS,V	100	100	100
Other meat (0204)	PHS,HS	HS	L,Q	100	100	29

Table 1. (Continued)

Product (CCCN)	Type of Nontariff Measures applied[a]			Coverage ratio[b]		
	EEC	Japan	Sweden	EEC	Japan	Sweden
Dairy						
Fresh milk (0401)	OM,V	DL,Q,HS	V	100	100	100
Preserved milk (0402)	OM,V	DL,Q,HS,ST	V	100	100	100
Butter (0403)	OM,V	Q,HS,ST	V	100	100	100
Cheese (0404)	OM,HS,V	DL,Q,HS,PLR,TQ	V	100	100	100
Eggs (0405)	OM,V	HS	V,L	100	100	100
Cereals						
Wheat (1001)	L,OM,V	HS,Q,ST	V,L	100	100	100
Rye (1002)	V	HS	V	100	100	100
Barley (1003)	L,V	Q,HS,ST	V	100	100	100
Oats (1004)	V	Q,HS	V	100	100	100
Maize (1005)	L,MP,OM,V	HS,Q	V	100	100	50
Rice (1006)	V	Q,HS,ST		100	100	0
Sugar and confection						
Beet and cane sugar (1701)	V	HS,MP,TX	L,V	100	100	100
Other sugars (1702)	V	HS,TX,DL,Q	V,L	100	100	66
Molasses (1703)	V	HS,TX	V,L	100	100	100
Sugar confection (1704)	BQ	HS,PLR,TX	V	100	100	17

Source: Alexander J. Yeats. "Agricultural Protectionism: An Analysis of its International Economic Effects and Options for Institutional Reform," in Trade and Development, An UNCTAD Review, No. 3, Winter 1981, publisher: United Nations.

[a] Restrictions applied in whole or in part to the SITC group. The key to the symbols is as follows:

PHS,HS = prohibitions due to health and sanitary reasons or health and sanitary regulations;
Q = quotas (method unspecified) or bilateral quotas;
TQ = tariff quotas;
TX = special internal taxes;
GQ = Global quotas;
OM = other price distorting measures;
BQ = bilateral quota;
DL,L = import licensing (method unspecified);
V,MP = variable levy or other minimum import price restriction;
R = restrictions (method unspecified) or special seasonal restrictions:
PLR = special labelling requirements;
ST = State trading;
SR = seasonal restrictions.

[b] Percentage of tariff line items affected by one or more nontariff measure.

These summaries and similar materials, along with research being done in individual countries, assist greatly in understanding the nature of the problem and will benefit those who are dealing with removal of restrictions and with trade liberalization.

APPLICATION AND IMPINGEMENT OF NONTARIFF BARRIERS

A noticeable aspect in the current discussion on nontariff barriers in agricultural trade is the lack of "hard" evidence about the manner in which the statutory and regulatory restrictions are applied, the degree to which trade is impeded by their application, and the magnitude of protection to particular commodities or commodity groups afforded by them. The GATT work of inventorying and classification is clearly preparatory to the next stage of exploring possible ways in which barriers arising from agricultural measures could be dealt with. That stage has been under way in GATT for some time but clearly does not involve measurement and commitment on the part of participatory governments.

Another striking aspect about the nontariff deliberations (as well as those dealing with customs duties) is that such evidence as exists pertains to violations or infringements in developed, as opposed to developing, countries (Balassa). This asymmetry, of course, is understandable due to the magnitude and importance of trade in the developed countries and the dominating nature of that trade on economic growth and welfare in developing countries.

Fortunately, the international organizations are all becoming more interested and involved in the measurement of agricultural protection by measures taken at the border of a country and by those domestic measures a country uses which restrict the free flow of trade (Balassa).

The Food and Agriculture Organization [FAO] and the Organization for Economic Cooperation and Development [OECD], in addition to GATT and UNCTAD, are currently researching the techniques of agricultural protection. These efforts, coupled with a large number of national and private studies, should assure the world of more and better information on the subject than has existed in the past.

NEGOTIATING NONTARIFF TRADE BARRIERS

It is appropriate to conclude by outlining and briefly commenting on some of the crucial options and courses to be considered when dealing with nontariff and agricultural restrictions in the context of international trade negotiations. I constructed this commentary some years back during the Tokyo round negotiations, but it is not written specific to those negotiations. The issues raised are generic in nature and apply to current as well as future negotiating fora. Indeed, they might well have been relevant to the politics and events of the Tokyo round, but are not less relevant for future consideration. Two major issues in that round were how to negotiate with the European Community, and whether the developing countries and Eastern Europe were to be real participants, or to remain on the sidelines during GATT negotiations among rich countries.

Foremost to be decided now is whether agricultural trade negotiations should be carried on primarily under the GATT or whether there should be supplemental institutions or arrangements for bargaining. Though there has been criticism of GATT's accomplishments on nontariff and agricultural barriers during the earlier rounds, demands for abandoning the GATT have not yet been taken seriously. In fact, there currently is strong support for new negotiations. The Japanese are particularly interested.

Since all multilateral trade negotiations take place predominantly under GATT auspices, is it feasible to conduct those of the agricultural and industrial sectors jointly? There is considerable disagreement on this point. Many interest groups and experts, especially those related to agriculture, support the concept of a joint negotiation process and believe that the failure to adhere to it during the earlier rounds led to many problems. In other words, they feel agriculture must be treated in the same manner as other sectors. Others feel equally strong about separate negotiations on agricultural trade issues and say that the existing rules of GATT as they apply to agriculture must be modified so as to get at the principal obstacle to international trade liberaliziation; namely, domestic farm policies. In this latter view, agriculture is different and must be treated differently.

A third major issue is the basis for negotiation. There seems to be general agreement among the experts that some method must be devised to measure the degree of protection—to quantify it in money terms—that nations give to their agricultural sector through domestic policies. Also, this economic calculation, though expensive and time-consuming, must precede any realistic, politically determined codes of conduct that might cover restrictive trade devices.

A most critical issue is codes of conduct, including rules of competition. Governments must be convinced that many of their present nontariff barriers and farm policies are of little value, although enormously costly, if there is to be a basis for successful negotiations on agricultural restrictions. In this regard, little can be gained by having trade barriers themselves the main topic of discussion during the negotiations. In such an atmoshpere, as witnessed in the GATT and, before that, in the Reciprocal Trade Agreement Acts of the United States, it has been difficult for a country to find an adequate quid, in political terms, for the quo given up when it renounced its protective devices. Prospective poor results in the swapping of trade concessions, therefore, may be an argument against holding agricultural and nontariff negotiations separately.

The concept of harmonization of policies is likely to be more successful when countries and industries can agree on issues which can be supported by treaty-bound agreements. This might be possible in the broad areas of health and sanitary regulations, grades, standards, and food codes, and even in administrative interpretation of legislative intent.

Ultimately, the fundamental issue is: how do governments obtain the necessary authority to negotiate meaningfully on such questions as nontariff agricultural trade barriers and related matters? As I have strongly noted elsewhere (Hillman), agricultural protection has been associated for at least two centuries with social and philosophical issues related to agrarian life and its values. In addition to this, nontariff barriers touch not only on economic policies but in many cases related to vast administrative bureaucracies in which public employment is an issue. Here the outcome of trade negotiation could, ex ante, be affected by some perceived effect it might have on the authoritarian mechanism.

In sum, nontariff and other agricultural trade barriers are tied up in all kinds of domestic laws, rules, and regulations managed by many different parts of each government. In the United States, for example, there is much congressional resistance to giving the executive branch a blank check; yet, the executive branch cannot effectively negotiate without some kind of mandate. Within the executive branch there is competition among the departments as to who will wield the power; hence the administrative bureaucracies within the departments vie keenly with each other for that power.

A further example of the U.S. administrative labyrinth that has to be negotiated by potential exporters was stated by a frustrated Canadian exporter: "In dealing with the U.S. Government we are dealing with many government agencies which throw the ball one to the other. One is in charge of labels, another takes care of classification, still another is in charge of the customs entry, then another sees to licensing, et cetera. Hence, we need a good customs-broker and a buyer eager to purchase one's product. This demands one to be very patient. Undoubtedly, this same comment could have been made as easily by a U.S. exporter regarding the Canadian Government" (Menzie).

Section 102, title I, of the U.S. Trade Act of 1974 deals specifically with negotiating authority relative to nontariff barriers and other distortions of trade. The President was given the authority over a 5-year period to negotiate trade agreements which would harmonize, reduce, or eliminate nontariff barriers or other distortions. Before such agreements can be effectuated, however, the President has to go through considerable consultation with congressional committees before entering the agreements, and he must follow strict procedures about publishing the agreements and stating how they serve the interests of the United States. It is obvious that the Congress desired assurance that the executive branch and the administrative bureaucracies would not have sole and final authority to deal with the nontariff barrier question and other vital trade matters.

Circumstances often change in that developed countries are sometimes concerned over gaining access to supplies of energy and raw materials. Many of these materials are controlled by developing countries which are increasingly forming supply cartels to promote their own interests, such as OPEC. This is not to say that traditional types of import barriers will not exist in such cases. There existed, however, a somewhat different atmosphere in the mid-1970's as compared to the 1950's and 1960's, and again in the 1980's, when the principal concern was access to markets by large suppliers of agricultural commodities and raw materials that were in great surplus. Conditions in the mid-1980's resemble more the 1950's and the 1960's in this respect.

Governments will deem it necessary to restrict trade whether it be for legitimate reasons or not. It is the discriminatory restrictions that create the anomalies in the sphere of international trade. Thus, in order to diminish the discriminatory aspect of trade restrictions and remove the arbitrariness of many of the standards and regulations, the multilateral trade negotiating bodies would do well to work towards global standardization of legitimate restrictive practices, such as health standards. The European Community, through the Third Country Meat Directive, and the F.A.O., through Codex Alimentarius, have taken steps in this direction. Nondiscriminatory quotas or variable levies could be the means by which economically struggling and under developed nations would be able to protect their intact or lagging economy But they should not be the norm as they apparently seem at present. The short memories of the trading nations have forgotten the era following World War I. With domestic issues threatening government survival, ignoring the interdependence of the nations' economies, and resisting the dynamics of international trade, nations withdraw from the competitive market and seek the mirage of stability behind trade control through restrictive barriers, principally nontariff trade barriers.

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A POLICY OPTION FOR U.S.A. FOOD AND AGRICULTURE

(By Dale H. Carley and Joseph C. Purcell)*

This paper develops a policy option designed to cushion aberrations in revenue flow to producers of agricultural commodities but permit market forces and trends to prevail. The proposed policy option is based on two premises: (1) The free (no Government intervention) prices for food and agricultural commodities and attendant revenue flows are unacceptably variable with a high risk to the individual farmer, and (2) current (and prior) Government policies and programs are too rigid with respect to emerging technologies and changing domestic and world markets.

Moreover, the proposed policy option adheres to the objectives: (1) Reduced Government (taxpayer) costs, (2) reasonable stability around developing trends in revenue-flow to primary producers, (3) retention and enhancement of the competitive position of U.S. agriculture in world markets, (4) efficient allocation of cropland and other resources to specific enterprises, (5) adequate food aid to the destitute and needy, and (6) necessary and desirable reserves of selected commodities to partially offset weather and pest related variation in production—managed independently of farm income supports.

The paper addresses: (1) The current issues and underlying phenomena in the ag-food sector, (2) evaluation of changes in the domestic and export markets for agricultural commodities, and (3) development of a policy option designed to cushion aberrations in revenue flow but permit market forces and trends to prevail.

ISSUES AND PHENOMENA

Unique phenomena underlying the policy dilemma for food and agriculture include: (1) Relatively nonresponsive domestic markets for most ag-food commodities with respect to prices and consumer income but with substantial variation among commodities and methods of utilization, (2) a variable export demand for major U.S. produced commodities placing the United States in the role of residual supplier, (3) a vast chasm between food needs and effective buying power of consumers—especially from a global perspective, (4) variable output related to weather and pests, and (5) overreaction on the part of farmers with respect to both favorable and unfavorable price signals.

These underlying phenomena contribute to variable market prices, and instability in income to primary producers with a high degree of risk. Moreover, it is a difficult balancing act to assure an adequate supply of food—as reckoned by quantity, quality, and variety—without accumulating price depressing surpluses.

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Current and prior Government programs designed to alleviate the variable and generally unsatisfactory price levels for farm commodities in the free market may be faulted on several counts including: (1) Too high a degree of rigidity in terms of prices—including loan rates and target prices, (2) too high a degree of commodity selectivity often adversely impacting other components of the agriculture-agribusiness complex, (3) failure to recognize and adjust to developing trends in both the domestic and export markets, (4) failure to recognize emerging technologies and their impact on production costs and output, (5) excessive Government (taxpayer) costs, (6) capitalization of production privileges in land values often accruing to the benefit of absentee owners and unrealistic assessment of production costs, (7) chronic excessive surpluses under Government ownership or loans with attendant high storage costs, (8) support price levels that provide an umbrella for foreign competitors—this is equivalent to pricing U.S. commodities out of international markets, (9) embargos and other Government intervention in international trade that conveys an image of the United States being an unreliable supplier, and (10) monetary policies that impact prices of U.S. commodities in the currencies of importing countries—in effect restricting or enhancing exports of U.S. commodities depending on the policy changes.

EVALUATION OF MARKETS

Changes in the domestic market, 1972–82

The domestic market is the dominant force undergirding the value created and the prosperity of the U.S. food and agricultural sector. The U.S. Department of Agriculture's estimate of personal consumption expenditures for food in 1983 is $371 billion (4).

An initial premise in food and agricultural policy is that food is not one thing but many things. The individual foods have a wide range of demand characteristics. It is generally conceded that the domestic demand for food is relatively nonresponsive to changes in consumer prices and income. However, it is important to recognize the wide range in response to consumer prices and income among foods and food groups. Also, there is a substantial difference in the immediate and longer time period response.

Plant source commodities can be consumed directly or converted to animal products. Within the grain group, wheat and rice are generally utilized as food grain while corn, barley, sorghum, and oats are utilized largely as feed grain. However, all types of grain can be used directly for food or converted to animal products.

The domestic market for grain for direct food use is largely independent (nonresponsive) of changes in grain prices and consumer income. However, as a society becomes more affluent and sedentary, the utilization of grain for direct food use decreases and the indirect use in animal products increases substantially. This, of course, requires a technology and resource base to expand grain production. Soybeans are processed into oil and meal prior to utilization with oil utilized directly in food fabrication and the meal largely converted to animal products. Virtually all forage is converted to animal products, while sugar, fruits, nuts, and vegetables are utilized directly as food.

Demand for food grains, pulses, lentils, potatoes, and other starchy foods are relatively nonresponsive to changes in consumer prices and income. Conversely, the demand for meat—especially beef—some fruits and speciality foods are relatively responsive to changes in consumer real income and retail prices.

There are two major sources of expansion (contraction) in the domestic food market: (1) Change in the size and age composition of the consuming population, and (2) changes in real income or buying power. Most of the change in the domestic market attributed to real income comes through substitution processes. During the 1972–82 decade, annual food consumption on a per person basis was in the range of 1,400 pounds product weight [4]. However, the per capital consumption of animal products decreased 39 pounds (616 to 577) between 1972 and 1982 with the decrease in animal product consumption replaced by 33 pounds increase in consumption of crop products.

Moreover, substitution within product groups contributed to a substantial decrease in the derived market for grain, oilseeds, and forage. Consumption of red meat—beef, veal, and pork—decreased by 14 pounds per capita between 1972 and 1982 but this was largely replaced by an increase of 13 pounds in poultry meat consumption. A 29-pound reduction in the consumption of dairy products was partly offset by a 10-pound increase in the consumption of sugar and sweeteners—apparently consumed largely in soft drinks.

The waning domestic market for beef and dairy products during the 1972–82 decade contributed substantially to the supply-demand imbalance under existing Government programs during 1980–82. These products utilize substantial quantities of both forage and grain in their production with a declining derived demand for forage and grain. The declining derived demand for forage exerted pressures to shift pasture land to grain and oilseed production contributing to excessive supplies. Conversely, poultry production requires no forage and substantially—possibly as much as 50 percent—less grain per unit of product. Likewise, sugar and vegetable oil production require a substantially smaller land base per unit of product compared with dairy products.

Changing age compositions of the population during the 1972–82 decade also contributed to substitution among foods. One of special importance is the substitution of soft drinks and other beverages for liquid milk associated with a decrease in the proportion of the population in the younger age groups. This substitution process contributed to the mounting Government held surpluses of dairy products in the 1980's.

This rather cursory evalution confirms the importance of changes in the domestic market underlying the 1980's commodities surplus dilemma culminating in the PIK Program and excessive Government costs.

Changes in the export market, 1972–82

Prosperity in the U.S.A. farm sector—as reckoned by inflation adjusted net income—is closely tied to exports by most accounts. However, the news media and some analysts may have overemphasized the export market relative to the domestic market with respect to both the dramatic upsurge in real net farm income in

1973, and the sharp decline in real net farm income in 1980 which persisted through 1982 [5].

The rise in net farm income in 1973 and again in 1979 was partially related to sharply rising cattle prices. Cattle production is the major source of cash receipts of farmers, and nearly all this revenue flow is obtained from the domestic market. Prices—net of inflation—received for poultry and hogs also increased sharply in 1973—again the domestic market was the dominant force underlying the upsurge in prices.

Nevertheless, the export market is important to American agriculture. And the variation in exports contributes to price and net real income instability in the farm sector. However, the animal products sectors are adversely impacted by rising prices of grain and oilseeds and their products as there are substantial lags in adjustments in production. Thus, the net impact of rising exports on net real farm income is not as straightforward as it appears on the surface. Also, there is an impact on the distribution of net income among the components of the farm sector.

U.S.A. agricultural exports are dominated by the crops component—food grains—wheat and rice—soybeans, coarse grains—largely corn—cotton and tobacco. These commodities are exported mostly as raw materials with relatively little value added and embodied labor—employment. Except for tobacco, these exports represent a substantial part of the output of U.S.A. cropland—as much as one-third or more in recent years. Thus, the revenue flow from exports accrues largely to the large land holders—relatively few in number.

The 1972–82 history of U.S.A. agricultural exports is well publicized—especially the sharp increase in the 1972–74 era followed by a relatively favorable export history through 1979. Beginning in 1980, increasing world supplies of agricultural commodities accompanied by static demand exerted a downward pressure on prices and subsequently U.S.A. exports. This subsequently contributed to declining net real income in the farm sector.

Several factors contributed to the variable character of the export market during 1972–82 either directly or indirectly. The events and sequence are well known but the precise cause—effect relationships are difficult to quantify.

At the beginning of the 1970's decade, surplus farm commodities and low prices were perceived as a major problem. However, the U.S.A. corn blight of 1970 and sales of grain to the U.S.S.R. in 1972 followed by a strong upsurge in export demand in other countries rapidly shifted the perception of the problem to one of emerging food shortages and a call for fence row to fence row planting.

Another prime policy concern as the 1970's emerged was the drain on U.S.A. gold reserves. It was apparently no longer feasible for the U.S.A. to support the dollar in foreign exchange with gold. Since 1933, the U.S.A. had maintained a policy, to exchange gold for dollars—to foreign holders of dollars only—at the rate of $35 per ounce of gold. This policy forged a strong dollar in international exchange and constrained U.S.A. exports.

A major change in U.S.A. monetary policy was the closing of the gold window to foreign dollar holders in August 1971. Thus, the dollar was no longer redeemable in gold to foreign dollar holders and was tantamount to floating the dollar against foreign currencies.

The direct impact of the 1971 change in U.S.A. monetary policy was a decrease in the value of the dollar against foreign currencies. This subsequently decreased the price of U.S.A. goods—including farm commodities—in terms of foreign currencies. Prices of U.S.A. farm commodities—in terms of nominal dollar Federal program support prices—became competitive with world prices in foreign currencies. The 1971 change in monetary policy contributed to an increase in U.S.A. farm commodity exports during the 1972–79 era in an indirect manner. Also an unprecedented peacetime price inflation accompanied the glowing export market of the 1970's. Even the 1974–75, oil crisis induced, recession failed to dampen the glowing prospects of the export market for U.S.A. farm commodities.

Within the 1970–80 decade, a second drastic change in U.S.A. monetary policy occurred in October 1979. The policy shift was from an orientation of accommodating money requirements to one of targeted—restricted—money growth with the objective of controlling price inflation. The direct result of this policy was an unprecedented rise in nominal interest rates—at times exceeding 20 percent as reckoned by the prime rate. Relatively high interest rates in the U.S.A. subsequently increased the exchange rate of the dollar in terms of foreign currencies.

The indirect results of the October 1979 change in U.S.A. monetary policy was an apparent reduction in agricultural commodities exports. Also, the ensuing worldwide recession and high levels of unemployment contributed to waning market demand in both domestic and export markets. Moreover, the change in monetary policy was the major contributor to increasing prices of U.S.A. farm commodities in terms of foreign currencies.

A POLICY OPTION

Emphasis on policy issues in 1984–85 appear to focus on low and variable net farm income—accompanied by excessive Government cost of programs designed to alleviate the farm income and chronic surplus problem. However, agricultural food policy must take cognizance of the goals of an adequate and wholesome food supply readily available to the consuming populace, and the role of agricultural commodities in alleviating the chronic and deepening international trade deficit of the United States.

Professor Spitze of the University of Illinois [3] stated that one of the missions of policy research is that of helping design alternative policies for foreseeable public issues including innovative approaches not yet tried. Ex-Secretary of Agriculture Bergland [1] in a national policy forum suggested the need for a policy that would not inflate land values with the attendant public perception that farm programs enrich large landholders. In the same forum Congressman Coleman of Missouri [2] alluded to the fact that traditional policy tools are too inflexible to resolve current problems.

The policy option sketched in this paper is directed to the twin objectives of dampening excessive aberrations in revenue flow from producers' expectations, and maintaining and enhancing the competitive position of U.S. agriculture in world markets. Moreover, the policy option could and perhaps should embrace all the important components of agriculture.

Expectations are defined in terms of developing trends. In the crops sectors this incudes trends in yield and price which produce a value or gross revenue per unit of land. In the case of animals and animal products it includes trends in feed efficiency, feed prices, and product prices which produce a value added or revenue flow less concentrate feed costs per unit of output. The expectations are a 1-year projection of the trend of the most recent 5 years for which data are available. Trends based on the most recent 5 years provide flexibility for trends to change in consort with developments in markets and technologies.

Upward trends in prices stem from general price inflation—macroeconomic factors—expanding market demand—domestic and/or export—supply reduction—attributed to adverse weather, pests, and so forth—or some combination. Downward trends in prices stem from evolving cost reducing and output increasing technologies, supply enhancement—attributed to favorable weather and other factors—static or declining market demand or some combination. Thus, trends can change in both magnitude and direction.

Entrepreneurs, including farmers, act on expectations. Current production patterns are conditioned by shortrun expectations while capital investments in machinery, land clearing and drainage, irrigation, buildings, machinery, and so forth, are conditioned by longer run expectations. Each entrepreneur may have a unique formulation of expectations but a public policy could not accommodate all. Events of the current and last year are most vivid in memory and fade with time. There is no magic in formulation of expectations but trends over the past 5 years appear to be a reasonable generalization of expectations.

Guidelines could be established for cushioning extreme aberrations around expected revenue shortfalls—revenue falling 10 percent below expectations. Likewise the Government could tax away windfalls exceeding 10 percent of expectations. Such a program could also be administered on a voluntary basis. The program could also be independent of general Government receipts and expenditures—a financial reserve or pool underpinned by Government.

A producer that chose a Government guarantee against an extreme shortfall in revenue flow would also share—pay into the reserve—an extreme windfall in revenue flow. The revenue shortfall could stem from adverse weather, pests, declining price, or some combination. Revenue windfalls could stem from rising prices, favorable yields, or feed conversion, or some combination.

Such a policy would provide a cushion or transfer of risk against extreme downside revenue flow for primary producers of agricultural commodities. This would also likely assure adequate supplies for consumers. The cost to farmers would be diversion of extreme windfall revenue gains to the reserve. The risk protection could be extended to producers of all important commodities on a voluntary basis.

Costs to the U.S. Treasury or taxpayer should be small over a period of 10 plus years with the potential of a positive flow to the reserve exclusive of administrative costs. Since there is no production base tied to land, land prices would not be unduly enhanced.

Production would be free to move to lowest cost areas and/or producers.

A crop producer expanding on marginal land might gain some temporary advantage but the yield expectation base would decline as less productive land is added. Likewise the yield expectation would increase for a producer restricting his land base to the most productive land.

U.S. producers of agricultural commodities would be free to compete in international markets. There would be no loan or floor prices to undergird foreign competitors. Prices would adjust as cost reducing technologies evolve, and/or as markets evolve. The initial impact of an expanding market—domestic and export—is an upward pressure on prices. Given an adequate resource base, output will subsequently increase with a timelag.

The proposed option would provide the same protection to all important components of the agricultural sector. Producers of animals and animal products would be cushioned against extreme aberrations in feed costs as well as product prices.

In addition to a revenue stabilization policy, a food reserve policy would also be desirable. This would include Government purchase and storage of selected essential food and feed commodities. Purchase and release could be administered by an agricultural food board. Moreover, a domestic and foreign food aid policy would be desirable. For the most part the food stamp—or income supplement—program for the domestic needy persons, and selected aid to foreign countries arising largely from natural disasters should be continued.

The revenue stabilization plan is expressed formally in the attached mathematical supplement. An example applied to an average United States and average Georgia soybean producer over the years 1970–83 is also attached.

Several modifications are also permissible within the general scheme of a financial reserve for farmers. A wider band around revenue expectations—plus or minus 15 percent for example—would reduce the revenue flow into and out of the reserve. A longer sequential trend—7 years for example—would also reduce the revenue flow into and out of the reserve. The basic premise is to provide downside risk to individual producers at a cost of sharing—placing into a reserve—windfall gains substantially above expectations.

The policy outlined here would provide protection for both price and production risk. This scheme has two advantages over commodity options markets: One, protection against pest and weather-related risk, and two, no up front payment is required. It does, however, require underpinning by the Government in the startup phase.

Mathematical Supplement

I Price Expectations:

Step 1: Compute Sequential Least-Squares Trend

$P_x = a_x + b_xT + e_x$,

where

P_x is the price of commodity X

T is time with year t-5=1, t-4=2, ...

a_x is the intercept

b_x is trend

e_x is a residual around trend

Step 2: Compute Price Expectation

$(E)P_{xt} = P_{xt-1} + b_x$

where

$(E)P_{xt}$ is the expected price of commodity X in the current year

$(E)P_{xt-1}$ is the trend price of commodity X the previous year

b_x is the sequential trend in the price of commodity X over the previous 5 years, b_x can be either positive or negative.

II Yield Expectations (Crops):

Step 1: Compute Sequential Least-squares Trend

$Y_x = c_x + d_xT + f_x$

where

Y_x is the yield of commodity X

T is time with year t-5=1, t-4=2, ...

c_x is the intercept, d_x is trend, f_x is a residual around trend.

Step 2: Compute Yield Expectations

$(E)Y_{xt} = Y_{xt-1} + d_x$

where

$(E)Y_{xt}$ is the Expected Yield of Commodity X in the current year

Y_{xt-1} is the trend value Yield of Commodity X in the previous year

d_x is the sequential trend in yield of commodity X over the previous 5 years, d_x can be either positive or negative.

III. Feed Conversion Expectations for Animal Enterprises

Step 1: Compute Sequential Least-squares Trend

$FC_x = g_x + h_xT + i$

where

FC_x is Feed Requirement per unit of Animal Product X

T is time with Year t-5=1, t-4=2, ...

g_x is the intercept, h_x is the trend, i_x is a residual around trend.

Step 2: Compute Feed Conversion Expectations

$(E)FC_{xt} = FC_{xt-1} + h_x$

where

$(E)FC_{xt}$ is the Expected Feed Requirement to Produce a unit of Animal Commodity X

FC_{xt-1} is the trend value Feed Requirement the Previous Year

h_x is the sequential trend in Feed Conversion, h_x can be either positive or negative.

IV. Revenue Expectations:

A. Crops:

$(E)R_{xt} = [(E)Y_{xt}][(E)P_{xt}]$

where

$(E)R_{xt}$ is Expected Revenue per unit of Land devoted to Crop X

$(E)Y_{xt}$ is Expected Yield per Unit of Land devoted to Crop X

$(E)P_{xt}$ is Expected Price per Unit of Commodity X

B. Animal Products:

$(E)R_{xt} = (E)P_{xt} - (E)FC_{xt}$

where

$(E)R_{xt}$ is Expected Gross Revenue Minus Expected Feed Cost Per Unit of Output of Product X

$(E)P_{xt}$ is Expected Unit Price of Output

$(E)FC_{xt}$ is Expected Feed Cost per Unit of Output.

V. Government Underwriting or Reserve

when

$(R)R_{xt} < 0.9\ (E)R_{xt}$, The reserve Pays the Deficit to the Producer

when

$(R)R_{xt} > 1.1\ (E)R_{xt}$ Producer Pays the Reserve or Government the Overage

where

$(R)R_{xt}$ is Realized Revenue

$(E)R_{xt}$ is Expected Revenue

Adjustments or Options:

$(E)P_{xt}$ is the National Price Adjusted for Geographic Zones (Surplus or Deficit) and Product Quality where applicable

$(E)Y_{xt}$ is the yield of the Individual Producer Requiring Accurate Accounting or Verification

$(E)FC_{xt}$ is the Feed Conversion for the Individual Producer and Applies only to the Concentrate Feed. In the case of poultry it would be nearly all the feed but would be a small part of the feed for a cow-calf enterprise.

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EXAMPLES

Tables 1 and 2 provide an example of the application of the optional method of revenue stabilization around developing price and yield trends. Table 1 reveals the results of application to the average United States soybean producer from 1970 through 1983 while table 2 reveals the results of application to the average Georgia soybean producer.

The average U.S. example in table 1 yields a positive accumulated balance of $25.22/acre, exclusive of administrative costs over the years 1970 through 1983. The largest positive aberration was in 1973 when the average producer would pay $26.01 per acre into the revenue reserve. The largest negative aberration was in 1975 when the average producer would draw $33.10 from the reserve. There would have been no revenue flow in or out of the reserve from 1977 through 1980 for the average U.S. producer.

The example for the average Georgia producer in table 2 reveals a more active revenue flow into and out of the reserve. The accumulated reserve over the 14-year period is, however, a positive $32.02 per acre or slightly larger than that for an average U.S. producer. The largest positive aberration was $64.65 per acre paid into the reserve in 1979. The largest negative aberration (draw on the reserve) was $61.69 in 1977. In the Georgia example no cash flow into or out of the reserve occurred in only 2 years 1976 and 1981.

Table 1. Example of Application of Suggested Policy Alternative to An Average U.S. Soybean Producer.

	Expectations/Acre			Realized/Acre			Realized-Expected			Cost of Program
Year	Price[a]	Yield[b]	Revenue	Price[c]	Yield[c]	Revenue	Price	Yield	Revenue	Per Acre[d]
1970	2.30	28.0	64.40	2.84	26.7	75.83	0.54	-1.3	11.43	4.99
1971	2.56	27.9	71.42	3.01	27.5	82.78	0.45	-0.4	11.36	4.22
1972	3.06	28.4	86.90	4.13	27.8	114.81	1.07	-0.6	27.91	19.22
1973	4.18	27.9	116.62	5.57	27.7	154.29	1.39	-0.2	37.67	26.01
1974	5.91	27.9	164.89	6.69	23.2	155.21	0.78	-4.7	-9.68	0.0
1975	7.53	24.5	184.49	4.60	28.9	132.94	-2.93	4.4	-51.55	-33.10
1976	6.52	26.5	172.78	7.32	26.1	191.05	0.80	-0.4	18.27	0.99
1977	7.29	26.1	190.27	5.79	30.6	177.17	-1.50	4.5	-13.10	0.0
1978	6.32	29.9	188.97	6.65	29.4	195.51	0.33	-0.5	6.54	0.0
1979	6.54	31.9	208.63	6.19	32.1	198.70	-0.35	0.2	-9.93	0.0
1980	6.86	32.3	221.58	7.61	26.4	200.90	0.75	-5.9	-20.68	0.0
1981	7.01	29.6	207.50	6.04	30.1	181.80	-0.97	0.5	-25.70	-4.95
1982	6.89	28.5	196.37	5.57	31.9	177.68	-1.32	3.4	-18.69	0.0
1983	5.72	30.9	176.75	7.87	25.7	202.26	2.15	-5.2	25.51	7.84
1984	7.05	27.1	191.06							

a. P = a+bT+e: P = Price/bu; T = time with t-5 = 1, t-4 = 2, t-3 = 3, t-2 = 4, t-1 = 5, a and b are regression constants; e is a residual Pt = Pt-1 + b = Expected Price/bu

b. Y = c+dT+f: Y = Yield in bu/Ac; T = time with t-5 = 1, t-4 = 2, t-3 = 3, t-2 = 4, t-1 = 5, c and d are regression constants; f is a residual Yt= Yt-1 + d = Expected Yield/Ac

c. Source: Realized data; U.S. Dept. of Agr., Statistical Reporting Service, Crop Production and Agricultural Prices, Selected Issues

d. Realized Revenue - Expected Revenue; If negative that less than 90% of expection = - cost to government (negative cash flow to government); If positive that exceeding 110% of expection = + revenue to government (positive cash flow to government)

Table 2. Example of Application of Suggested Policy Alternative to An Average Ga. Soybean Producer.

Year	Expectations/Acre			Realized/Acre			Realized-Expected			Cost of Program
	Price[a]	Yield[b]	Revenue	Price[c]	Yield[c]	Revenue	Price	Yield	Revenue	Per Acre[d]
1970	2.38	21.0	49.98	2.95	23.0	67.85	0.57	2.0	17.87	12.87
1971	2.69	21.8	58.64	3.00	25.5	76.50	0.31	3.7	17.86	12.00
1972	3.13	25.6	80.13	4.10	15.0	61.50	0.97	-10.6	-18.63	-10.62
1973	4.15	21.0	87.15	5.55	21.0	116.55	1.40	0.0	29.40	20.69
1974	5.84	17.5	102.20	6.90	25.5	175.95	1.06	8.0	73.75	63.53
1975	7.64	22.2	169.61	4.55	25.5	116.03	-3.09	3.3	-53.59	-36.62
1976	6.59	25.7	169.36	6.95	23.5	163.33	0.36	-2.2	-6.04	0.0
1977	7.02	28.6	200.77	5.95	20.0	119.00	-1.07	-8.6	-81.77	-61.69
1978	6.24	21.9	136.66	6.40	17.5	112.00	0.16	-4.4	-24.66	-10.99
1979	6.27	16.0	100.32	6.25	28.0	175.00	-0.02	12.0	74.68	64.65
1980	6.88	22.6	155.49	7.55	11.0	83.05	0.67	-11.6	-72.44	-56.89
1981	7.07	14.9	105.34	6.09	19.0	115.71	-0.98	4.1	10.37	0.0
1982	6.88	16.6	114.21	5.45	27.0	147.15	-1.43	10.4	32.94	21.52
1983	5.73	23.5	134.66	7.70	21.0	161.70	1.97	-2.5	27.04	13.57
1984	6.85	21.8	149.33							

a. P = a+bt+e: P = Price/bu; T = time with t-5 = 1, t-4 = 2, t-3 = 3, t-2 = 4, t-1 = 5, a and b are regression constants; e is a residual Pt = Pt-1 + b = Expected Price/bu

b. Y = c+dT+f: Y = Yield in bu/Ac; T = time with t-5 = 1, t-4 = 2, t-3 = 3, t-2 = 4, t-1 = 5, c and d are regression constants; f is a residual Yt= Yt-1 + d = Expected Yield/Ac

c. Source: Realized data; U.S. Dept. of Agr., Statistical Reporting Service, Crop Production and Agricultural Prices, Selected Issues

d. Realized Revenue - Expected Revenue; If negative that less than 90% of expection = - cost to government (negative cash flow to government); If positive that exceeding 110% of expection = + revenue to government (positive cash flow to government)

PERSPECTIVES FROM AGRIBUSINESS

COMPARATIVE ADVANTAGE IN AN INTERDEPENDENT WORLD: THE NEED FOR A REALISTIC AGRICULTURAL POLICY FOR THE UNITED STATES

(By Orville L. Freeman, Business International Corp.)*

A POLICY PAPER

U.S. agriculture—both its fabulous and problem-fraught productive capacity and its key function in the U.S. trade balance and in the role the United States plays in the world economy—argue compelling for the formulation of a comprehensive agricultural policy, a policy that is responsive to domestic concerns as well as to international requirements.

It is a task both urgent and vital. If the United States of America is going to continue its world leadership as well as improve the well-being of her people, it is critical that we have an agricultural policy with clear-cut goals and objectives. I am certain that if there is public understanding, support and participation, a policy will evolve that is responsive to reality, and that the President of the United States will be able to provide the leadership to put such a policy in place and carry it forward to execution.

FACTS AND FIGURES

A policy is soundest when it is solidly based on the facts and forces that must be factored into the policy equation.

It is not an overstatement to describe the accomplishments of American agriculture as the No. 1 production miracle in the history of mankind. Today only 2 percent of the population of the United States is on the farm. On the average, each of these farmers feed 76 Americans at prices that are lower as a percentage of personal income than anywhere in the world. In addition, agriculture, directly and indirectly, is responsible for approximately 25 percent of U.S. employment.

Between 1965 and 1980, while farm population decreased by one-half, annual output in constant dollars tripled, increasing by over $100 billion. Between 1970 and 1982, grain production in the United States climbed from 170 million metric tons to 330 million metric tons. And while U.S. exports climbed from 38 million metric tons to 150 million metric tons, Soviet imports climbed from 8 million metric tons to 43 million metric tons. American family farm agriculture accomplished this with 350 million acres of land under plow, in constrast to the 500 million acres cultivated in the Soviet Union. The 44 billion dollars' worth of American agricultural exports in 1981 were an essential offset to our otherwise rapidly deteriorating balance of trade and current account.

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*Orville Freeman served as Secretary of Agriculture under President John F. Kennedy.

AT THE CROSSROAD

Despite this unexcelled record, American agriculture today stands at a troubled and uncertain crossroad. All is not well on the farm. Aggregate income is the lowest it has been in 50 years. Farmer return on equity in 1981 and 1982 was a negative 9.2 percent and 6.5 percent, respectively, and will probably be negative again in 1984. Land values declined for the first time in 27 years. Exports have slipped in the last 2 years, suffering a 20 percent shrinkage. The debt/equity ratio is way up as farm debt climbed 300 percent between 1971 and 1983. Bankruptices and foreclosures are sharply on the rise. The cost of price-support production control programs has zoomed, reaching a record $18.9 billion in fiscal 1983. If one includes the cost of the PIK Program, price support costs were actually $28.3 billion, 10 times the average annual cost in the 20-year period from 1961–81, and 5 times higher than the largest expenditure in those two previous decades.

WHAT WENT WRONG?

These adverse developments call for a careful, thoughtful reexamination of where we have been, and where we want to go. Only if there is recognition and understanding of the massive change that has taken place in American agriculture can we develop a viable and workable policy that will make it possible for this Nation to regain lost ground and to take appropriate advantage of the magnificent productive plant that we have built over the past generation.

How, then, did we lose ground? How did we get ourselves into the mess we're in? The answer to that question is, of course, complex. But the key point is that agricultural policy, as implemented over the last two decades, has not reflected the fact that American agriculture is no longer national in scope. It is international. We are no longer relatively isolated from the rest of the world in any way.

To illustrate: in the 1950's agricultural exports were less than 10 percent of cash farm receipts. Today, exports represent 30 percent of total cash receipts and 54 percent of crop receipts; production of 4 acres out of every 10 is destined for foreign markets. Typically, we export a fourth of the U.S. corn crop, half of the soybean crop, 60 to 65 percent of the wheat crop, and over 40 percent of cotton and rice crops.

THE GLOBAL CONNECTION

What these figures demonstrate, dramatically and incontrovertibly, is that for the U.S. agricultural plant to be continuously operated at an acceptable capacity level, foreign market share must be maintained and expanded. Farmers and agribusiness alike now have a vital stake in international conditions, economic and political, a stake that did not exist before the last decade.

THE NEW UNCERTAINTIES

Agriculture has always been subject to great uncertainties. Historically, these uncertainties were predominantly on the supply side. No one can control the weather. Disease and pests, equally unpredictable, also seriously affect supply. Adjusting production to signals in the marketplace is much more difficult, and the lead time required much longer than for industry. These uncertainties continue. But uncertainties in demand have now become as great, or even greater, in the internationalized marketplace. Let me sketch for you two scenarios that will manifest these new uncertainties.

A GROWTH SCENARIO

The first scenario can be properly labeled a growth scenario. It starts with the fact that the middle-income developing countries increased their imports of grain from 12.7 million metric tons in the years 1960–63 to 44.7 million metric tons in 1977–79. With their own annual economic growth in a 5- to 7-percent range, these countries became an explosive market for agricultural products, particularly grain, resulting in firm and growing prices. Had the world not slipped into major recession in 1980 and, with it, the threatening debt overhang we face today, U.S. agricultural economic growth would not have slumped. As a matter of fact, had economic growth continued in those countries and around the world, the 38 low-income developing countries whose increase in agricultural imports have climbed only to 8.7 million metric tons a year, would have accelerated their purchases as well.

It follows from this that, if the world returns to a reasonable level of growth and prosperity with favorable growth rates in the developing world, the demand for food, and particularly for protein, would again explode. That is where future markets will be found. In fact, a number of studies projecting such growth conclude that there is actually a serious threat of major shortfalls. Some studies estimate a shortfall of as much as 70 million metric tons of grain by the turn of the century. Obviously, if this should happen, U.S. agriculture would respond, assuming we still have the productive capacity. Prices would move up solidly and American agriculture would prosper. That is one scenario.

A COMPETITIVE SCENARIO

A more realistic scenario, give the current world economy still largely bogged down in recession, with the heavy debt overhang inhibiting growth and expansion of developing world markets, is that for at least the next 4 or 5 years, there will be strong competition for commercial world markets. During the late 1970's, the United States became, in many respects, a residual supplier. This occurred in part because of a very strong dollar and also because of price-support levels that were higher in some instances than the prices our competitors in world markets were able to offer. This we can no longer afford.

U.S. policy, resting solidly on our comparative advantage as an agricultural producer, must be to move more aggressively into world markets and be prepared to meet competition everywhere. I emphasize meet competition. We would make it crystal clear that the United States will not initiate export subsidies. However, we should also send a strong signal that if our competitors in the world market engage in export subsidies we will match them.

Therefore, this Nation, built on private enterprise in a competitive marketplace, should firmly set the course for an open, competitive world, with agriculture in the lead. In the process, we can point the way for the industrial side of our economy to reverse its current tilt toward protectionism.

THE SKEWED STATE OF AFFAIRS

Currently, world agricultural markets are in an abnormal state. On a global basis, production has been expanded significantly as our competitors have been favored by excellent yields in the last few years.

At the same time, global demand has fallen sharply because of the world recession. The result is a glut of grain. The total carryover of grain stocks, plus the equivalent of idle acres in the United States, has climbed to an all-time high of 283 metric tons, or in terms of world consumption days, to 68 days. For perspective, this carryover compares to 104 days in 1961 when I became Secretary of Agriculture. The problem we face in these terms is thus not a new one.

The immediate result is weak market prices and an acute recession in the agricultural sector of the U.S. economy. Given these circumstances—and they are likely to recur in unpredictable but inevitable cycles—the United States must have in place a domestic farm program to support and assist the American farmer. To make the program work, experienced and competent management must also be in place.

POLICY PREMISES

The policy premise for this program is twofold:

First, the production capacity of the U.S. agricultural sector must not be seriously eroded. History has shown that we, at home, and the world internationally, will need American production capacity when global economic cycles emerge from their trough.

Second, and equally important as a policy imperative, both fairness and equity demand support by the Government of this Nation to the farmers who have contributed so much to our economic well-being, and who are uniquely subject to uncontrollable external causes, and to cyclical movements and global interactions.

Nevertheless, a policy and program to accomplish what, for want of a better word, I will call this defensive purpose, must be sensitive to global realities and designed in a fashion that does not result in the United States pricing itself out of world markets.

A FEASIBLE PROGRAM

How can this be done and what will it take to design an agricultural policy for the United States that will effectively integrate both domestic and international realities?

On the international front, the United States must launch a carefully coordinated, major, sustained, integrated agricultural export offensive. Such an offensive should take advantage of our production superiority, our efficient agribusiness marketing systems, and of U.S. exporters geared to foreign needs The efforts must recognize that demand has leveled off in the industrialized countries and that the developing world, now taking one-third of U.S. farm exports, offers the best opportunities for expansion in the years ahead, if and when those nations again show income growth.

It must be recognized that this offensive will be a different kind of game than we have known in the past, requiring a wider range of skills, resources, and initiatives. An export strategy based on the notion that it can expand sales simply by writing orders will fail. We will have to do our homework. Americans will have to research potential customer countries in terms of their total requirements. We will then have to look at consumer needs and wants, purchasing power, political pressures, the needs for infrastructure such as port facilities and transportation, and customer countries' needs for new production, storage, and processing technology, as well as farm products. In short, we will have to size up these opportunities in terms of packages that meet the customer's needs.

Happily, the United States is solidly positioned to put such packages together and to tie them into a sensible domestic farm program.

Since 1954, and the passage of Public Law 480, this country has, on a concessional basis, moved over $100 billion of food and fiber to meet human needs, contribute to economic development, and build commercial export markets in developing countries all over the world.

Shipments since 1954 have ranged from 15.3 million metric tons of grain in 1967 to an estimated 4 million metric tons in 1983. In the process, we have learned how food abundance can be effectively utilized. We have also learned how, if carelessly managed, it can be counterproductive.

AN INTERNATIONAL INITIATIVE

It is my conviction that the time has come to combine that knowledge and our farm abundance into a solid, efficient, international agricultural initiative. Such an initiative should have four components:

1. Humanitarian.—We should reach out all over the world to help feed truly needy people. A major effort with significant U.S. contribution is now underway in drought-stricken Africa. That effort must be strengthened and expanded. In addition to relief, food aid should be tied into self-help projects focused on improving production potential, aimed especially at small producers.

2. Developmental.—The United States should expand its economic development assistance program to many more developing countries. Food aid can be used to stimulate agricultural development in developing countries. Food-for-work programs, building needed infrastructure, can be highly successful if well managed.

Title 3 of Public Law 480 provides for the United States to grant money it receives for agricultural commodities back to the country to finance agricultural development projects, with forgiveness of funds if the project is successful. The authority of title 3 could be expanded to help finance investment by American agribusiness companies in developing countries. The present initiative of the Bureau for Private Enterprise in the AID Agency can make good use of title 3. It should be given more support and resources.

THE INDUSTRIAL POLICY CONTEXT

Our Nation is engaged today in a great debate on industrial policy. We are trying to identify what should be the relationship between Government and the private sector as American industry faces new technology, new challenges, and new competition around the world. One can hardly pick up a newspaper or tune into a television station without exposure to the question of how to relate to Government and the private sector as we go forward to meet competition in world markets and successfully accommodate basic structural change.

There is no doubt in my mind that the private sector moves technology to use more efficiently than does the Government, and that this is true in developing countries as much as in the industrialized ones. Obviously, profit and risk criteria must be met if private agribusiness companies are to invest in the developing world and move modern technology in production and marketing to small farmers in the developing countries. My point here is that identifying these win-win situations opportunities for private sector activity in the developing world, and encouraging U.S. companies to respond, could and should be an important ingredient of our national agricultural policy. Designed in close cooperation between Government and business at the highest level, this kind of global enterprise would have a triple dimension for the United States. It would yield profits; it would build export markets; and it would make friends in the political arena.

A GRAIN "SPECIAL DRAWING RIGHT"

Another innovative way of putting American food abundance to constructive use in solving pressing global problems would be for the U.S. Government to make available to the International Monetary Fund a substantial volume of wheat, in addition to the credit already recommended by the President. The IMF could use this wheat to alleviate the debt loads that now plague many of the developing countries. The wheat could be supplied to the IMF to grain-importing LDC's, with payment negotiated over a period of time at appropriate levels of interest. Such a move would make it possible for hard-pressed LDC's to use foreign exchange they would otherwise spend on grain imports to meet their international obligations, or to invest in internal growth and development.

3. Marketing-minded.—We must expand our market development activities, coordinating them closely with our economic development initiatives. Since the mid-1950's, the United States has run a remarkably successful foreign market development program for agricultural products. It is a cooperative program between the Foreign Agricultural Service of the U.S. Department of Agriculture and some 60 private commodity organizations, ranging from wheat and flour to raisins. The costs of these programs are shared by Government and the commodity groups. These market development efforts need to be expanded. They should command top priority and adequate resources.

4. Competition-oriented.—The United States must fight unfair trade competition wherever it occurs, particularly in nations that use export subsidies, of have erected import barriers for agricultural products. This means developing a long-term strategy to prevent some countries from putting up new protective barriers and getting other nations to reduce unfair levels of protection, such as Japan still has for beef and citrus. Measures to fight protection and subsidies must be specifically targeted. The United States must convince other nations that we are serious about unfair practices and that we will take steps to make these practices so costly that others will be discouraged from using them. Measures the United States can use range from instituting countervailing subsidies to limiting access to the U.S. market if we don't have fair access to other markets.

A PROFILE OF U.S. AGRICULTURE TODAY

Before I proceed further with my policy recommendations on the domestic side, let me sketch a concise profile of what American agriculture looks like today.

At present, approximately 112,000 farms—5 percent of the total number of farms—produce just under 50 percent of the entire output of food and fiber originating in the continental United States. These are operations that had annual sales of $200,000 or more in 1981. It is important to remember that these major producers are mostly family farms, not what we think of as corporate farms. The great bulk, somewhere around 95 percent, are individually owned and operated family farm businesses.

At the other end of the scale are the large majority of farms, 1.7 million of them, comprising 71 percent of all economic units classified as farms by the USDA. These are generally small farms, frequently worked part time, with off-farm income covering a major portion of the family living expenses. These 1.7 million farm units, with annual farm sales of less than $40,000, produce only 12.5 percent of total U.S. output.

The final feature of the profile consists of the medium-sized traditional family farms. These make up a little less than one-fourth of all farms, some 580,000. They are predominantly family owned and operated, with the owner-operator engaged full time in farming pursuits. Sales run between $40,000 and $200,000 annually. In the aggregate, these medium-sized farms produce 38.5 percent of the output of U.S. agriculture.

So we have three general classes of farming enterprise that are different in size, productivity, and income requirements. How then should a comprehensive, national farm program relate to these three groups?

A THREE-PRONGED APPROACH

Let us consider first the largest farms—the 5 percent who produce approximately 50 percent of the total output. According to a number of studies, these farms have cost structures that allow them to be profitable. They have, in recent years, benefitted greatly from Government programs, but there is considerable question as to how important those programs really are to the continued economic vitality of these larger farms; they could probably make it on their own.

The small farmers, too, are economically strong, albeit in a different way. Because their off-farm earnings are sufficient to fully offset the small losses of income from farming, these small farmers are relatively well off in economic terms, and apparently satisfied with their ability to live in rural areas and pursue farming as a secondary, part-time or in some cases, hobby operation.

The middle group, however, is in a different situation. Recent research by Texas A&M University covering cotton farms in Texas' southern high plains clearly suggests that Government farm programs have been of major benefit to these medium-sized farm operators. The Texas study found that, without a program along the lines of the farm program of 1981, only 42 percent of the medium-sized traditional family farms would survive over the next decade. In contrast, the Texas A&M study found that 98 percent of the smallest farms would be able to survive for 10 years without any program. And the largest farms—those over 4,400 acres—would survive without any Government programs. It is the middle category of farms for which a long-range farm program is needed for economic survival.

NO CHANGE

I foresee no drastic alterations in this profile. All the evidence from agricultural scholars concurs that, for the foreseeable future, the composition of the U.S. agricultural sector will remain much as it is now.

The real question, therefore, is how can a program or programs be developed to meet the economic, social, and cultural conditions of these diverse groups?

I have already cited evidence that the small producers would survive without any programs. National agricultural policy can do little to help or hurt this group of farms. However, State programs in the areas of education, health, medical service, roads, schools, et cetera, are important to the economic and social well-being of this group of nearly two million American families.

The group of large farmers would also do well without Federal farm programs. These are educated, innovative producers, well financed, efficient, highly mechanized. They can compete effectively in both domestic and world markets. They are fully poised to take advantage of the food requirements of the world for the remaining years of this century.

The needs of this group will best be served by constructive trade and macroeconomic policies. These producers will benefit from Government development efforts to stimulate the national economies of the world so that there is capability to purchase the needed food commodities, including those produced in the United States. Export credit assistance efforts; export market development assistance; sensible, consistent, international trade policy; stable and reasonably valued currency; good infrastructure in the way of transportation and port facilities, these are the policies that will benefit this group of highly efficient farm businessmen. Domestically, they need some assistance from public institutions in research, and a stable, economic climate of growth.

There is, however, one additional policy element to be considered for these large farm producers: However well trained, educated, financed, mechanized, and efficient, they are still subject to the vagaries of nature. And because their market is international, they are also subject to global uncertainties and shifts in the economic and political climate. These factors, coupled with the large capitalization and credit requirements of farms with sales of $200,000 or more, subject larger farms to a much higher level of risk than many other businesses. Long-term policy should therefore provide a way to cushion the risk faced by this very important part of our productive economy.

At a minimum, a long-range farm program should provide a world market clearing nonrecourse loan program for the large producers. This loan program would enable them, in periods of extreme adverse conditions, to assure orderly marketing and some degree of risk sharing with the public. Such price support loans could be based on a 3-year or 5-year moving average of world market prices or some significant percentage of that level.

An additional idea, which deserves further study and consideration, is the possibility of providing a mechanism whereby these large producers would have both the legal and economic ability to limit their production in periods where favorable weather conditions and unfavorable market conditions have combined to produce excess supplies. I have in mind a system in which, under a Government-referred and sanctioned referendum, large producers of the major commodities could vote to decide if they wanted to have mandatory acreage and production adjustments so as to maintain a reasonable supply-demand balance. There would be little or no expenditures of public funds to carry out such a program. It would provide the economic and legal mechanisms to avoid wasteful and economically disruptive short-term surplus buildups.

Finally, and undoubtedly the most difficult challenge, is the effort to devise a sensible program to deal with the medium-sized family farmers. I believe we need to offer these farmers some system of income transfer protection, perhaps similar to the existing target-price concept. A scheme could be developed that would assure these farms a return from the marketplace, and from the farm program, that would enable the most efficient of them—and this would be a majority—to continue to be viable contributors to our society. Not incidentally, such a program might well include a requirement that the farmer follow sound soil-conserving practices.

Dealing fairly with these farmers is important to the national weal, not only because they produce nearly 40 percent of our total food and fiber output, but also because they are a vital part of the social and cultural fabric of rural America and indeed, the nation. A modest expenditure of well under 1 percent of the national budget could, in my judgment, be justified to protect and preserve this important part of our society.

THE NEED FOR COORDINATION

A meaningful agricultural policy, responsive to international and domestic realities, requires effective coordination or private and public programs and initiatives. As matters now stand, a wide range of activities need to be tied into logical and sensible packages. Currently, no person or group is performing this function. Recently, at the initiative of the Ohio Farm Bureau, a number of agricultural leaders got together in Chicago to discuss the need for a new leadership position to represent the private sector in export development for agriculture. I find much merit in their recommendations. But I believe we need more than a new leader in the private sector. We need a leader/spokesman to articulate and coordinate a new agricultural policy for this Nation, indeed, for the world. I suggest that he, or she, be a Presidential appointee with Cabinet rank. This Cabinet member should not have direct line responsibility, but should have the complete confidence of, and direct access to, the President. This would make it possible for him, or her, to coordinate across the entire U.S. Government and the private sector, speaking with one voice for, and on behalf of, the President on all issues and topics involving U.S. agricultural policy. This person would also maintain direct contact with foreign governments, at the highest level, to measure, in concert with the resident U.S. Ambassador, the Secretary of State, the Administrator of AID, and the U.S. Secretary of Agriculture, how U.S. agricultural policy is being carried out.

LOOKING BACK—AND FORWARD

Twenty-three years ago, John F. Kennedy named me U.S. Secretary of Agriculture. I was priviledged to serve in that capacity for 8 years. Then, the importance of agriculture to the well-being of the people of the United States, and of the world, did not receive priority attention. Today, as we approach the mid-point of the decade of the eighties, the critical importance of agriculture, if mankind is to advance toward its goal of human betterment, is universally recognized. The time has come for this country, as the leader of the free world, to put in place a sound agricultural policy, and to give the highest priority to carrying it out—at home and around the globe.

THE NEED FOR A FEDERAL AGRICULTURAL EXPORT POLICY

(By Steve Kopperud, American Feed Manufacturers Association, Inc.)

AFMA is the national trade association representing the manufacturers of over 70 percent of the primary formula livestock and poultry feed sold in the United States. Feed manufacturers annually buy $10 to $15 billion in feed ingredients, mostly grain and grain byproducts, making the U.S. feed industry the Nation's largest domestic user of grain.

Early in 1984, the AFMA board of directors recognized that our association must take an active role in the formulation of long-term Federal agricultural policy direction in general and the specifics of 1985 farm legislation. We have attached a copy of our agricultural policy statement as part of these comments.

One of the fundamentals of AFMA's farm policy position is the clear realization that U.S. agriculture does not exist in a domestic vacuum. Farm policy decisions cannot be made outside the context of the U.S. position in international commerce. The economic health of U.S. agriculture, indeed, the overall economic health of the Nation is directly related to U.S. agriculture's ability to compete in international markets. To quote from AFMA's farm policy paper:

> "U.S. agricultural policy must recognize we live in a world economy, and that agricultural markets are vital to the U.S. Domestic price support programs should not artificially encourage increased production abroad, thereby continuing the erosion of U.S. agricultural exports.
>
> "The U.S. must regain its reputation as a reliable supplier of agricultural products to world markets . . . AFMA supports additional efforts to export animal products and reduce artificial barriers in other countries against importation of U.S. agricultural products."

A second central point in AFMA's export philosophy is the need to increase overseas sales of livestock and poultry products. These efforts have been thwarted in recent years by nations which have seen fit to compete with U.S. products by subsidizing their exports at levels impossible to overcome. At the same time, other nations have erected artificial barriers to U.S. agricultural exports, while at the same time seeking unrestricted access to U.S. markets for their goods.

AFMA's conscious effort to couch its agricultural policy position within an international context is due primarily to the recognition that the presumptions of strong export markets for grain and other U.S. farm products for the past 20 years are no longer valid for the future. This Nation's future ability to compete for international markets faces the most severe challenges in its history. Consider the following prevailing circumstances:

Expanded foreign production, often in direct response to U.S. domestic farm support programs, is increasingly sold with the benefit of export subsidies;

Declining purchasing power in otherwise promising new markets inhibits U.S. ability to expand its global market;

A world economy, recovering at a slower pace than that of the United States, and a strong U.S. dollar, stifle this Nation's ability to sell products abroad.

These factors have combined to produce a 20-percent decline in farm export earnings over the past few years. In 1980, the United States sold $43.8 billion in ag exports abroad, with ag exports alone responsible for a positive balance of trade. In 1983, total agricultural exports totaled only $37.7 billion with a similar decline in export volumes, and the United States had a negative balance of trade.

AFMA recognizes there have been good-faith attempts to create directed Federal policy on agricultural export development. However, these have often fallen short of the goal, or they have relied too heavily on traditional approaches developed during the golden years of ag exports. This is likely due to the myriad interests which must be accommodated from within and outside the Federal bureaucracy.

What has developed, however, is a patchwork of specific solutions and actions on specific situations as they develop. Some of these have been successful; others have unfortunately conflicted with previous Federal actions, leaving domestic agricultural shippers and overseas customers bewildered as to the principal direction of U.S. agricultural export policy.

What has been lacking within the Federal trade bureaucracy is a cohesive, realistc Federal export policy that will enable the United States to regain its role in world agricultural trade. It is imperative that such a policy be formulated not only for the short-term needs of 1985 farm legislation but for the long term so that a clear signal is sent to overseas competitors.

It is desirable to utilize the perspective and abundant expertise of private-sector agribusiness to thoroughly examine current agriculture-related trade and export policies, programs, and practices to make sure these efforts increase rather than hinder the competitiveness of U.S. agricultural products in international markets.

The private sector is also the best source of fresh approaches and recommendations on which export promotion and assistance programs are the most realistic hope for increased overseas sales of U.S. farm products. It is also the private sector exporter who can identify specifically those barriers erected by foreign competitors which have served to erode U.S. markets abroad, and who likewise can identify practical, workable recommended actions for dealing with these impediments.

As the process of formulating omnibus farm legislation proceeds through 1985, it is imperative that debate be conducted in the context of improving exports in part through the judicious development of Federal domestic farm support programs. It is equally imperative that such domestic farm support programs not conflict or inadvertently serve to aggravate the current weakened position of U.S. exporters in the world market.

The Federal development of farm policy must be debated with an eye firmly fixed on the increased economic viability of domestic and export markets, and not completely due to immediate legislative iniatives. AFMA supports a free, market-oriented agricultural export policy that avoids artificial signals to overseas markets, reinstates the United States as a reliable supplier of agricultural products, avoids agriculture-only embargoes as a diplomatic tool while promoting additional exports of U.S. livestock and poultry and their products.

AMERICAN COTTON SHIPPERS ASSOCIATION—POLICY STATEMENT

(By Peter F. Deffly)

The American Cotton Shippers Association was founded in 1925 and is basically comprised of merchants, shippers, and exporters of raw cotton who are members of five federated associations, located in 16 States throughout the Cotton Belt: the Arkansas-Missouri Cotton Trade Association, Atlantic Cotton Association, Southern Cotton Association, Texas Cotton Association, and Western Cotton Shippers Association.

The 525 member firms of the ACSA handle over 80 percent of the domestic cotton crop and 90 percent of the export market. The association takes an active part in promoting the increased use of cotton in the United States and throughout the world; establishes with other trade groups, national and international standards for trade; collaborates with producers throughout the Cotton Belt in formulating farm programs and cooperates with Government agencies in the administration of such programs.

On May 11, in New Orleans, the ACSA celebrated its 60th anniversary. The preamble of the report of our Foreign Affairs Committee, which deals with all matters relating to foreign markets, stated:

> Since 1924, the United States has exported 301 million bales of cotton valued at $44 billion with the overwhelming percentage handled by members of the American Cotton Shippers Association. During this 60-year period, ACSA exporters have combed the markets of the world and through their expertise and performance, have captured large portions of these markets for U.S. cotton when national legislation has enabled us to be competitive with other major exporting countries. A variety of cottons have been provided to satisfy the demanding and constantly changing desires of consumers. Performing this task during high and low markets, lean and good years, has earned for the U.S. exporter, a valued reputation for fair dealing and contractural integrity.
>
> Today, while the U.S. economy continues to strengthen, a major factor in our economic health is faltering in the form of our balance of payments. Until the world economy manages to regain its former stability, we will not see a recovery in consumption of our manufactured products. Our historic strength has been and is today our agricultural prowess and cotton exporters are a major strength and earner of exchange. We urge Government authorities to

take advantage of every opportunity to enlarge the U.S. share of world markets. Market-oriented national legislation, continued supplies of cotton desired by the world's spinners are necessary ingredients of a successful future for cotton exports.

I. Export prospects

If we maintain a market oriented philosophy rather than a production control philosophy, we should be able to maintain our share of exports in the world market. Our potential for supplying a larger percentage of agricultural products to global buyers will depend a great deal on weather patterns throughout other producing areas of the world and on the decisions of central governments with regard to the quantity and variety of crops to be planted.

The current Russian crops balance the expanding offtake of Russia and her satellites and should mitigate her being the agressive exporter she has been in the past. This situation should open opportunities in Europe for U.S. cotton.

With a 20 million-plus crop this year and assuming a continuation of production incentives, China could become a formidable competitor in Far East markets. Currently hampered by inadequate handling facilities internally and at the ports, these could be overcome in the years ahead. Even if the United States is competitive pricewise, China would have a tremendous transportation advantage. However, a bad crop could change this scenario dramatically.

II. Domestic policies

We recommend the following:

(A) Removal of minimum loan levels from the 1985 farm bill. This concept did not have industry support when it was hastily conceived by House conferees in the concluding minutes of the House-Senate Conference on the Emergency Agricultural Act of 1978. In better times, and in the spirit of compromise, the industry unwisely requested its retention in the current bill.

(B) Setting the loan at a reasonable level that would protect farmers from disaster, but would not encourage planting that would lead to large surpluses. In May our members suggested this level be set at 85 percent of the world price, a reduction from 90 percent in the current bill. We could, however, support the 75 percent level suggested by Calcot at the July 13 hearings of the House Committee on Agriculture in Fresno, CA.

(C) When the loan has been set at reasonable levels, the target price should be fixed at a reasonable percentage of the loan. We favor the retention of the target price, but recommend it be set at 120 percent of the loan rate, a level approved by the House in 1981.

(D) The 8 month loan extension provision should be amended to make any extension subject to the discretion of the Secretary. The lesson of last year is a case in point. Had the extension been optional, the CCC would have access to loan stocks for distribution to PIK participants and the unfairness of the harvest for PIK requirement would have been alleviated.

(E) Resale of CCC stocks should be at loan levels or at current market price, whichever is higher. Restrictive resale policies preclude the sale of CCC stocks when Government programs result in excessive supplies which could be the case in 1984-85.

(F) Removal of the limitation of payments from the 1985 farm bill. When it becomes necessary to control production, it is essential to get large farmers to participate in the programs. This is not possible with the present low limitation.

(G) High interest rates should be held in check as they drastically reduce farm income and substantially raise the cost of exporting our products. Congress has the major responsibility in curtailing spending programs and reducing the Nation's deficit.

III. Competitiveness

(A) High loan and target prices reduce our competitiveness in world markets. We simply cannot escape the fact that loan levels designed primarily to benefit U.S. producers actually benefit foreign producers, especially those in centrally controlled governments who have more flexibility to rapidly increase plantings and take maximum and immediate advantage of our mistakes.

Chart 1 attached shows that since 1930 the United States has not shared in any significant degree to the tremendous increase in world production or consumption. If we are to reverse the downward trend in domestic consumption and to share in increasing world consumption, the U.S. farmer must have a market-oriented farm program in order to maintain his level of operation.

(B) Other characteristics of competitiveness which enhance our chance of exporting products are:

(1) Regularity and dependability of shipments;
(2) Competitive freight rates; and
(3) Standardization of packaging.

IV. Export credit

Export credit progrms are essential to cotton exports. The risks involved in financing our more reliable customers are minimal compared with the cost of maintenance and disposal of large surpluses. Without question, the GSM-102 program is one of the most important tools at our disposal. Even with the repayment problems in many countries, credit for agricultural exports should be maintained at the highest possible level. The Department of Agriculture should have the dominant voice in determining which countries, and on what terms, credit is granted. Credit should be allocated as follows:

(1) We should give all the GSM credit requested to countries with a good repayment record, such as Korea. In times of falling prices and surpluses, it is foolish to risk losing export sales by limiting credit due to considerations not directly connected with agriculture.

(2) In the case of countries where there is some risk of default, the Government should weigh such risks against the cost of larger support payments and absorbing surpluses.

V. Strong dollar and trade impediments

It is clear that the overvaluation of the U.S. dollar severely hampers the export of agricultural commodities and products thereof. It makes our products more expensive for our customers to buy, especially when compared with their domestically produced polyester. Further, the strong dollar makes cotton production more attractive to producers in soft currency countries, such as South America. Finally, the ever-increasing value of the dollar makes it very risky for cotton mills to make use of our credit programs, because they cannot calculate the ultimate cost of repayment in their own currencies.

As merchants, we are strongly opposed to any and all cargo preference statutes, here or abroad.

VI. Unfair trade practices

Cotton doesn't have any specific trade barriers to confront in world markets. However, there is no question that many cotton producing countries use special tax incentives, favorable exchange rates, and other methods to price their cotton for export.

The U.S. Goverment should warn other producing countries against increasing acreage when we cut back production. It makes little sense for us to cut back production only to see our competitors jump in and take up the slack by increasing their production. Chart I vividly illustrates that U.S. producers have paid the price by not sharing in an ever-increasing world production and consumption.

VII. Export controls

We feel agricultural embargoes are counterproductive and unfair in that they place too great a burden on the farm sector of our economy. Any farm legislation passed by Congress should contain provisions to allow fulfillment of existing contracts regardless of the reason for the embargo.

VIII. GATT

No comment.

IX. Export legislation

(A) We recommend reauthorization of and funding of a revolving credit fund. Although authorized by the 1981 farm bill, the Revolving Credit Program has not been funded. Many problems involved with the Export Credit Guarantee Program could be avoided with a Revolving Credit Program adequately funded. Specifically, repayments by borrowing countries would be credited and interest paid would increase funds available in succeeding years.

(B) We recommend the implementation of a reasonably priced export insurance program that would afford the exporter protection against the many unknown risks of doing business in certain markets.

X. Food aid assistance and markets in developing countries

We think surplus agricultural commodities should be used to feed the hungry around the world. The most effective and lasting way to help developing countries build their economies is through a strong world economy. World trade should be as free as possible from restrictions. As mentioned previously, high interest rates are very harmful not only to our own agricultural economy, but also to the Third World countries, which are trying to repay their loans.

XI. Other proposals

(A) We favor allowing CCC guarantees to be traded in secondary markets.

(B) We are opposed to the encouragement of export trading companies for agriculture and feel that the private sector can do a better job than Government in establishing barter and countertrade arrangements.

In the cotton trade, private companies and marketing cooperatives have efficiently and creatively fulfilled all needs of textile mills throughout the world. All we need is a fair opportunity to compete.

ATTACHMENT—CHART 1

[In million 480 pound bales]

	Production		Consumption		Exports
	United States	Foreign	United States	Foreign	United States
1930 [1]	14,512	12,103	5,552	17,883	7,430
1935	11,080	16,375	6,757	22,059	6,528
1940	13,144	17,105	10,344	17,575	1,223
1945	9,390	13,086	9,768	16,053	3,831
1950 [2]	9,999	20,526	10,729	24,829	4,280
1955	14,698	29,464	9,371	32,266	2,320
1960	14,237	30,768	8,353	40,898	6,857
1965	14,938	42,122	9,596	44,323	3,035
1970	10,192	44,844	8,204	49,127	3,897
1975	8,302	45,753	7,250	54,355	3,311
1980	11,122	53,655	5,891	60,044	5,926
1983 [3]	7,725	59,875	5,930	63,682	7,000

[1] Statistical Bulletin 417. Statistics on Cotton and Related Data 1930-1967, March 1968.

[2] Foreign Agriculture Circular Supplement—World Cotton Stocks 1947-1983, February 1984.

[3] Estimated.

THE POSSIBILITY OF DECLINE IN U.S. AGRICULTURE—CAUSES AND ALTERNATIVES

(By William J. Hudson, the Andersons)

The foundation of American agriculture has been, in the present century, its extraordinary productivity. The ability of American farmers to produce far more than is needed domestically is made clear by many statistics—for instance, the often mentioned fact that today only 3 percent of our labor force are farmers, compared to 20 percent in 1930, 10 percent in 1950, 8 percent in 1960, and 4 percent in 1970.

As American farm productivity has increased, it has been necessary and natural for farmers to seek markets beyond the domestic, and this has made them subject to changes in the world economy and to the political interactions among nations. The greatest opening of world markets occurred in the early 1970's, when the Soviet Union changed its policy and began to buy significantly more grain, at the same time that our products were still needed in Europe and that many undeveloped countries began a food buying spree of unprecedented scale. In the 1980's, however, this opening of world markets has weakened considerably, and now U.S. agriculture faces the possibility of significant decline.

Let us begin our discussion of the causes and alternatives with a review of what seems clearly the driving force of our agriculture, its extraordinary productivity—upon what does it depend, and will it remain? As many authors have shown, it is the land itself that gives rise to our excellence, in combination with the system of democratic capitalism which guides how the land is managed.

Measured in bare acres, the United States cultivates about one-eighth of the world's total area of grains and soybeans—but the United States has only one-twentieth of the world's population. Herein lies what economists call our comparative advantage. We have a very high ratio of arable land to population, compared with other countries. To make the comparison even more dramatic, we should consider not only the effects of the number of acres, but also of their location—their latitude—the climate which prevails upon them, and the skill of their managers. For example, it is easy to observe that a farmer with 100 acres of land which bring him 50 bushels per acre is no greater a contributor to supplies than another who has 50 acres but which yield him 100 bushels per acre. When we line up the world figures so that each nation is seen as a farm of a certain size with a certain yield, and then we adjust all the acres to the same yield—using the United States as standard—we find that the United States has one-fourth of the world's productive capacity but only one-twentieth of the world's population.

This is one of the most decided comparative advantages in the annals of economics, and because the subject is food, it gives rise to the notion of moral responsibility—many people believe that Americans are morally obligated to tend her garden well, and to make its products available to others in need. Our legislative history is filled with proof of the desire of our people to donate food in times of disaster and at other times to the world's less fortunate people. Public Law 480—Food for Peace—and the Blended Credit Program have been the most recent vehicles, and have accounted for the distribution of many millions of tons of American food to deserving people around the world.

Let us now ask, "What might happen to this natural comparative advantage held by American agriculture—could the garden shrink and fill with weeds?" The answer is certainly, "Yes, it is possible." The causes of such a decline could be classified as natural and manmade. For instance, the climate over the American Plains and Corn Belt might become unfavorable. It has been estimated that every year climate delivers the equivalent of over 1,000 quads of energy to the American Farm Belt, in the form of precipitation—this is 10 times the manmade energy used by all Americans for all purposes and a hundred times the manmade energy used directly for farming. Climate can thus be seen as a gigantic lever, with the farmer at its focal point. And the quantity of energy is not all—the rainfall must come at the right time. If the yield of corn and soybeans is to be high, the American climate must produce, in the last 3 weeks of July and the first 2 of August, a series of frontal systems that sweep across the Plains about every 3 or 4 days, with about an inch or so of moisture—not too much, either—and with adequate but not excessive warmth. This rather intricate arrangement has prevailed for many decades, some more so than others, but in the past two summers it has been decidedly irregular. In fact, the summer of 1983 brought the worst weather for corn and soybeans in 50 years. The question, "Is climate changing?" is crucial, but it cannot be answered. Until science unravels the mystery of climate, we must regard it as an aspect of fate—with a capital F.

This is nothing new, however, for the affairs of mankind. The universe provides many things in the category of fate, and what we humans are left to do is to make sure that is not manmade reasons that lead to the decline of our garden. Thus the central thrust of this essay is not with productivity and climate, but with demand and policy.

We will accept the premise, without once again reciting the plenteous litany of statistics, that export markets are critical for a vibrant U.S. agriculture and that of the many such markets, the export demand for corn and soybeans is the most critical, because around those crops lies the most powerful portion of our comparative advantage. We will also argue that it is far secondary whether these corn and soybeans are shipped as raw materials or are processed into derivative products such as meal, oil, livestock, or even finished meat.

The primary market for corn and soybeans is the feeding of livestock. Modern feeders seek corn for its carbohydrate energy, and soybeans for their protein. Computerized rations blend the proper amounts of corn, soybeans, and other ingredients to best fit the needs of all the livestock species at all the stages of their life cycle. If all the world's livestock herds are regarded, then, as the ultimate users of our corn and soybeans, in need of a world ration, we must find a way to conceive of the behavior of corn and soybeans jointly. Such a means is not readily available from the USDA, as it keeps statistics for corn and soybeans separate. We certainly agree that it does not make sense to add together tons or bushels of apples and oranges, nor of corn and soybeans, except merely to count ships or other containers. But private research has suggested that the world market does indeed regard corn and soybeans together, in terms of price, in terms of exchange, and in terms of inflation.

Tables appended to this essay show the conversion of USDA tonnage and price data to the concept of real expenditure or meat budget. From the standpoint of common sense, here's how our market for corn and soybeans appears to work:

EACH COUNTRY'S MEAT BUDGET

Budget	Million tons	Price per ton	Exchange marks/dollars
A. 1,000 million marks	10.0	$100	1
B. 1,000 million marks	5.0	$100	2
C. 1,000 million marks	2.5	$200	2

Suppose we start with case A: a country's budget can afford 10 million tons at $100/ton if the exchange is 1 mark per dollar. If, however, as shown in case B, the exchange rate doubles, and it takes 2 marks to get a dollar, then the tons have to suffer—or else the budget has to balloon. Budgets don't normally do this, at least in the aggregate, according to figures on world trade for the past decade. Further, as shown in case C, if grain prices themselves double—due to climate, let's say—then the tons have to decrease even more, to make the budget come out constant. Budgets are apparently determined by the total economic prosperity of a nation, including inflation. The world seeks to keep its real expenditure on trade for livestock feed constant to down. It has other things to do with its money, such as buying automobiles, oil, and arms. (We need to remember that the share of world trade held by all foods of all kinds, in monetary terms, is well below 10 percent.)

As shown in an appended table, we have arrived at this concept of a world budget for corn and soybeans by the following methods: we have taken USDA annual tonnages of corn (actually, all coarse grains) and soybeans (actually, all beans and meal, expressed as soybean meal equivalent), multiplied these by annual average prices (f.o.b. U.S. Gulf), multiplied this by the exchange rate (given as SDR's per dollar—the SDR being a convenient average of the values of the British pound, the French franc, the German mark, and the Japanese yen), and then deflated this total expenditure with the U.S. GNP export deflator. The results are as follows:

World Trade Expenditure, Coarse Grains and Soybeans

Crop year	*Billions of real SDR's*
1969-70	4.6
1970-71	4.5
1971-72	4.7
1972-73	9.4
1973-74	10.8
1974-75	8.3
1975-76	8.4
1976-77	9.1
1977-78	8.4
1978-79	9.1
1979-80	9.1
1980-81	10.8
1981-82	8.7
1982-83	8.5
1983-84	10.2
1984-85 [1]	9.4

[1] Projected.

Note.—USDA tonnage and price, dollar remains strong, inflation flat.

It can be seen that this world budget took a quantum leap in 1972-73. Before this time, it averaged between 4 and 5 billion real SDR's, and after this time it averaged about 9 billion real SDR's. Three years are exceptions: 1973-74, the year of OPEC, inflation psychology, a poor U.S. crop, new Soviet demand, and fears of world starvation; 1980-81, a year of simultaneous drought in the United States and the Soviet Union, and of a newly robust dollar; and 1983-84, a year of record U.S. set-aside and record poor U.S. weather. These variations and those of the other years can be successfully modelled against beginning stocks of coarse grains, taken as a percent of anticipated annual utilization, in the world excluding the United States (see graphs).

Seen in this light, with an average real expenditure of 9 billion SDR's, the decade of the seventies looks less like a boom with unlimited potential, and more like a bubble which momentarily outstripped the underlying forces of population and economic development. At some point in the coming years, the real expenditure on trade of livestock feed may once again grow, but for the present it is resisting.

World trade expenditure in deflated units of world currency is flat for the two commodities of key interest to the United States, namely corn and soybeans. At this point, let us note that if this argument of a relatively fixed budget is true, then it is no salvation to increase the price of corn and soybeans via processing (added value) before shipment. We might get the higher price, but we would get commensurately less volume. We might not get the higher price, of course, depending on our comparative advantage in the realm of processing and labor, versus other countries.

Our market for corn and soybean exports is flat, and what is equally or more distressing is the fact that U.S. share of world trade expenditure on corn and soybeans is declining. Our share of world trade expenditure was belows 60 percent before the boom began in 1972-73, rose to about 69 percent in 1980-81, and in the latest year has declined again to below 55 percent—the lowest since 1970-71. (See graphs.) A private business which is in a flat or declining market and which is also losing share finds itself under enormous pressure to examine its strategy or face demise. Such is the case of "American Agriculture, Inc." as it faces the strategic options which will make up the 1985 farm bill.

Causal connections in world affairs are treacherous, but the data on customers and competitors suggest that we have lost market share for two principal reasons: U.S. foreign policy and U.S. domestic farm policy (in the light of a strong dollar). The Carter embargo of the Soviet Union has been analyzed enumerable times, but if we are to believe the President's memoirs, the embargo was closer to a knee-jerk political reaction than to a carefully preplanned policy. Various USDA analysts say that the purpose of the embargo was to punish the Soviet livestock sector, and that their Soviet figures show that such purpose was achieved—especially in the months following the action. But if this is success, most U.S. farmers regard it as Phyrric, because the data now show much greater restraint from the Soviet Union in its expenditure on livestock feed imports (which includes wheat in their case), whatever the country of origin. And as we look at the increasing acreages of our competitors, we are also led to wonder if handing them the biggest of all world customers did not substantially encourage their expansion. But almost overwhelming these considerations is the fact that the embargo led to our opening of the farmer-owned-reserve, the mistaking of the reserve by farmers as a real market, the buildup to over 3 billion bushels of corn in carryover, and then the emergence of the Payment-in-Kind Program [PIK]. In one year, the Federal Government pumped more money into American farming than ever before (some estimates put PIK at plus $20 billion—anyway, it's the same scale as the expenditure on world trade itself), and paid farmers not to grow about one-third of the normal amounts of wheat and corn. The PIK money saved net farm income, but the set-aside has left the entire input supply and grain handling business in distress, wondering if it's really true that the world market only needs two-thirds of our farmers anymore. When the average American is told the scope of PIK, that his taxes went to farmers not to produce a quantity of grain that might have been enough to have fed, theoretically, several hundred million people, he feels a deep sense of moral failure.

In general terms, the U.S. loan price on corn sets a floor to the world market price. There are (brief) periods when this isn't true, but since grain in world trade is denominated in dollars, the bottom price for it in this country tends over year-long periods to be the bottom price for it everywhere. The U.S. loan price for corn has been rising in recent years (though many farmers will say it's not high enough to cover their costs of production)—and when this price floor is translated through the exchange rate, a tremendous incentive can be seen for our foreign competitors. A $2.50/bu price on corn accompained by a dollar that has strengthened 30 percent in the last 3 years means an effective price to our competitor farmers of $3.25/bu. This effect is exaggerated in countries such as Argentina and Brazil, where the exchange rate is even more strongly in favor of the dollar and the need for dollars is great, in order to service debt via the export of commodities.

American domestic farm policy has unwittingly combined with the strong dollar to provide increasing incentive to our foreign competitors. And simultaneously, the domestic policy of the European Economic Community [CAP] has encouraged production of grain in excess of domestic needs in Europe, so that European farmers become new competitors to American. The chief worry of British farmers during the recent dock strike was whether it would interfere with exports of British wheat and barley. Although the Common Agricultural Policy of the EEC receives a great amount of heat in our farm policy debates, it must be remembered that the EEC still maintains a large trade deficit with us in agricultural items (mainly corn and soybeans), and that the practicability of changing the very policy on which the Community was founded may be small. The impact of increased loan prices during an appreciating dollar probably outweighs the difficulties with Europe, because there is greater comparative advantage in Argentina and Brazil, if it is once unloosed.

The strength of the dollar may at first seem like another aspect of fate—or at least it may seem that the strength of the dollar defies gravity, and that it must soon fall. Predicting the dollar is indeed more treacherous than interpreting the Soviet grain embargo, but the dollar is certainly manmade rather than natural, and we have argued above that the dollar is in effect integral to the price we can charge for our key agricultural exports. Thus we must take a position on what has happened to our currency and what is likely.

Private research on world trade and world debt indicates that, in the past decade, the two are closely connected. The boom in world trade during the 1970's was at least partially enabled by the creation of credit; furthermore, credit was created in excess of money, a condition that finally decelerated trade and led to a strong dollar. The primary mechanism for the creation of credit in excess of money is thought to be the so-called Eurodollar market, which involves the offshore ownership of dollars. A table is attached to this essay showing the year by year changes in our money supply M-1 versus the year by year changes in the size of Eurocredit (debt), as furnished by Morgan Guranty Bank. The nature of the Eurocredit phenomenon can be seen in the following data:

[Dollars in billions]

Year	New U.S. money (M1) created per year	New Eurocredit (debt) created per year
1965	$8	$2
1970	11	11
1975	14	32
1980	25	123
1981	27	146
1982	38	64
1983	43	50

It would appear from this data that although the Eurodollar market started out as a reasonable vehicle to help finance the operation of mutinational companies, it had the cost advantage of being unregulated, and it soon became perhaps the most dynamic market ever witnessed—especially as it received deposits from OPEC oil price increases in 1973 and relent them in high velocity to the very countries who could not pay the new prices for oil and food. If the loans were being used to pay the current account and not for capital improvements, the day would come when a country's export earnings would be inadequate to servicing even the interest on the debts, let alone the principle. At present, there are several hundred billion dollars of credit outstanding—in excess of our supply of money (which some might say has grown too fast anyway). This balloon of credit acts as demand for dollars, apparently countering such previous indicators of the value of the currency, such as the balance of our trade. In fact, it can be argued that were we not exporting so many dollars, how would the debtors keep up as well as they are, without default and collapse?

World economic development, and capitalism in particular, has a history of resilience, and in the very long run, we can hope for a return to high growth. But the message for us, today, of world debt and the strong dollar, is a continued uphill battle for our exports of all goods, especially corn and soybeans. The message is that our future policy must take the toughness of the market into account—instead of, for instance, believing that world population pressure will quickly overwhelm economics and provide us with a new boom. While we are waiting, several years may pass, and the garden will have many weeds.

A private business losing share of a flat market knows that the first thing it must do is cut costs. Is it any different for American agriculture?

A private business losing share of a flat market knows that the second thing it must do is sell harder and better—and if possible, find new markets. Is it any different for American agriculture?

As shown by a table attached to this essay, Federal Government support of farming in the United States has been with us for a very long time. Extremely sharp reversals in policy rarely occur, nor are they recommended here. But the form and quantity of Government support should surely be reappraised.

The American system of democratic capitalism involves Government actively in many sectors of the economy, but the form of Government support to agriculture is different from that in most other sectors: historically, Government farm programs have sought to accomplish the transfer of wealth to farming via commodity price. This is somewhat akin to arguing that when the Government saw fit to save Chrysler, it should have propped up the price of their cars. Price is the most sensitive aspect of democratic capitalism. Targets and loan levels obscure the true global price signal from American farmers, and they produce too much. Then the Government is forced to store the surplus, which becomes too expensive, which then leads to the kind of sharp policy reversal [PIK] that plays havoc with the farmer's support industries. The key to regulating supply should be price—the true global price signal, unmasked by Government supports.

At the moment, of course, as we've argued above, the true global price signal is down. To profit, we've got to lower our costs. This could mean a selection process that winnows the more efficient producer from the less efficient. Such an alternative may seem harsh, but many a small businessman might ask, "Why should such a process not take place in agriculture, as it does in other American business?" Which does the American taxpayer want, a price support system that costs him dearly and might inadvertently give global markets to competition (leaving our garden in weeds), or a new form of support which treats the problem of the rural poor separately from the global price signal for corn?

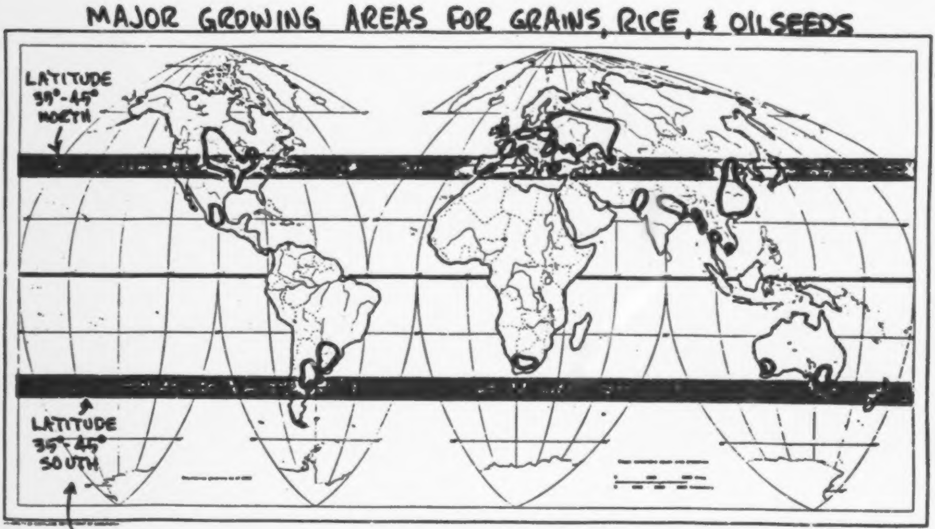
Farming, especially in the context of the small, family farm, is a very desirable way of life to many people—including those presently on such farms and many who are not. After a century's decline in the absolute number of farmers, today there seems to be a greater supply of would-be farmers than are farms, so that land sells for a price too high to provide the new owner a satisfactory return, at least in comparison to other businesses. But in view of the global difficulties described above, and the decline in exports that has resulted, a great many farmers—especially those on smaller farms, but also those whose debt to equity is high—are in a condition that might be fairly called rural poverty. As with other kinds of welfare, assisting such people as the rural poor can be seen as a worthy and important goal of legislation. If the goal of assisting the rural poor is seen as worthy by the American public, there are many other avenues by which the Government may accomplish this without directly supporting the price of crops.

Let us finally comment on production control versus export enhancement. Neither alternative is attractive, from the standpoint of keeping our markets relatively free. But if a choice must be made between the two—as in the plausible case of Congress deciding to spend more on the farm sector instead of less, as we urge—then export enhancement is preferable. The grounds for such an assertion are mainly moral but there is also some precedent to believe that what begins as humanitarian assistance will later produce viable, paying customers. Frequently cited are the cases of South Korea, Formosa, Hong Kong, Singapore, and others, who were originally AID recipients and who now pay their own way. Reference can also be made to the postwar revitalization of Europe and Japan, during which our food aid was essential.

In sum, we have argued in this essay that the United States has the greatest comparative advantage in food production ever known, centering on the production of corn and soybeans. This advantage will be ours until climate changes or until unwise policies cause its demise. The world market for corn and soybeans, expressed as total real expenditure in units of world currency, is presently flat—and the United States is losing market share. The flatness is produced in the wake of the Soviet embargo, of excessive credit creation for the Third World now followed by debt payment problems, and of productivity gains in the EEC—together with export subsidies built into the CAP. Our competitors such as Argentina and Brazil have expanded acreage and taken market share, encouraged by the floor prices of crops established by U.S. domestic farm policy, as translated to them by the strong dollar. The alternative for American agriculture, as would be the case for a regular firm facing declining share of a flat market, is to cut costs and sell harder. Efficient producers will survive such an alternative, inefficient ones may not.

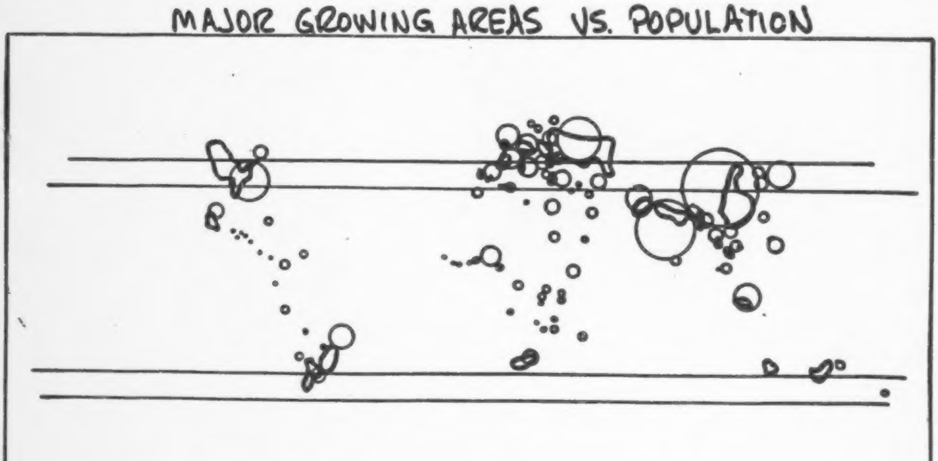
The problem of the rural poor, however, need not be solved through the mechanism of price. In our system of democratic capitalism, price is crucial—and we should let the true global price signal come through to American farmers. Until the underlying factors of population growth and economic deyelopment catch up with and slowly exceed the bubble of demand we called the grain export boom of the 1970's, it will be more desirable, at least morally, to assist our farmers by export enhancement rather than to pay them not to produce.

MAJOR GROWING AREAS FOR GRAINS, RICE, & OILSEEDS


LATITUDE 35°-45° NORTH
LATITUDE 35°-45° SOUTH

EITHER SIDE OF EQUATOR HAS A NARROW BAND OF LATITUDE THAT IS BEST FOR GROWING TODAY'S VARIETIES OF GRAINS & OILSEEDS.

MAJOR GROWING AREAS VS. POPULATION



"COMPARATIVE ADVANTAGE" IS AREA PER PERSON, CORRECTED FOR LATITUDE, MOISTURE, & MANAGEMENT -- I.E., YIELD.

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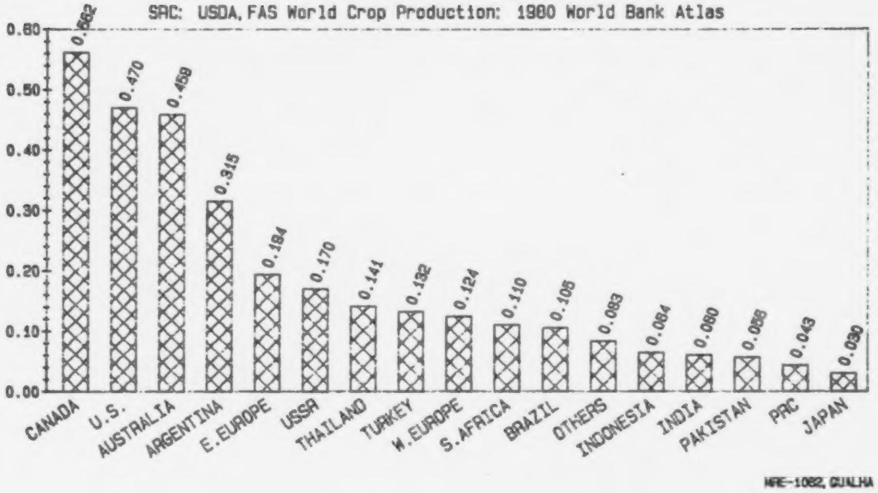
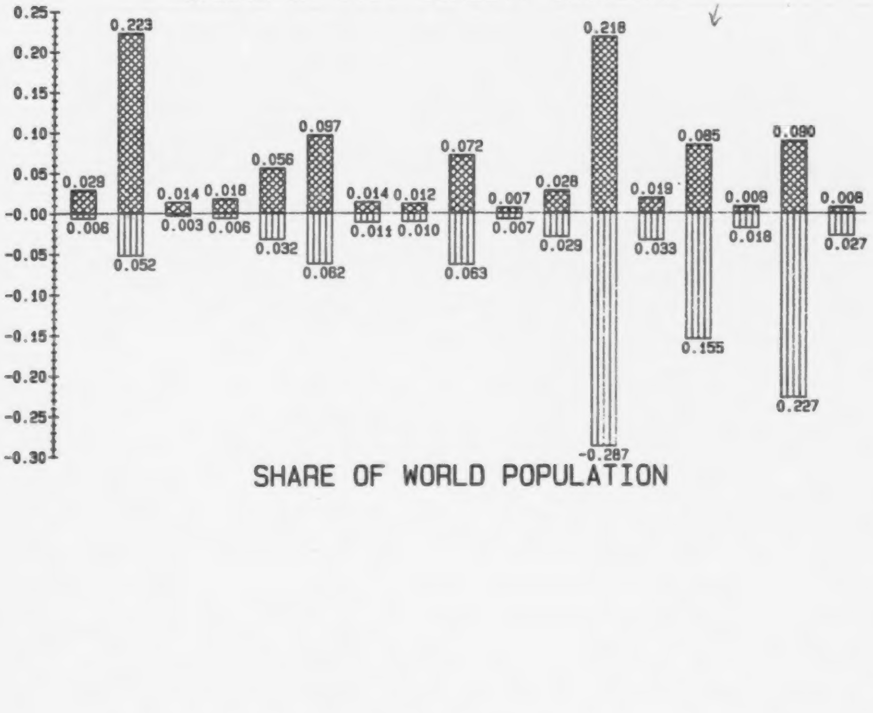
"U.S. QUALITY" HECTARES PER PERSON

SRC: USDA, FAS World Crop Production: 1980 World Bank Atlas



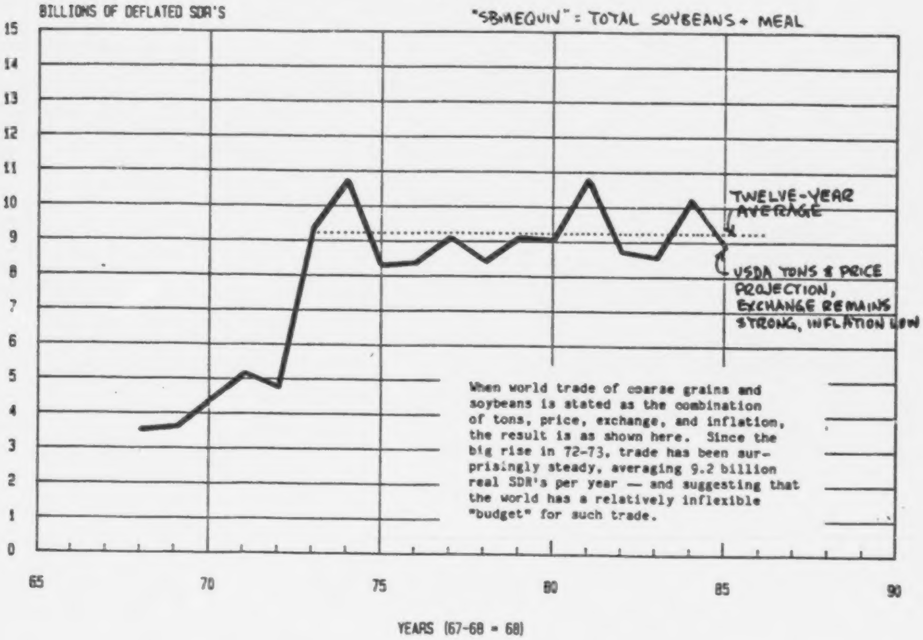
SHARE OF "U.S. QUALITY" CROPLAND



SHARE OF WORLD POPULATION

WORLD TRADE OF COARSE GRAINS & SBMEQUIV

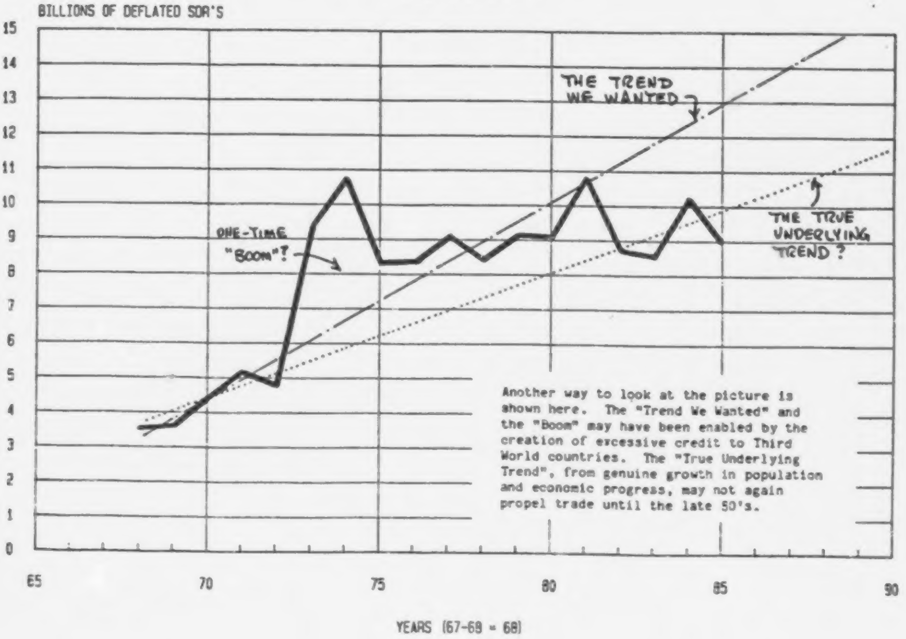
MA-29, CGSBMEQ.GR



When world trade of coarse grains and soybeans is stated as the combination of tons, price, exchange, and inflation, the result is as shown here. Since the big rise in 72-73, trade has been surprisingly steady, averaging 9.2 billion real SDR's per year — and suggesting that the world has a relatively inflexible "budget" for such trade.

WORLD TRADE OF COARSE GRAINS & SBMEQUIV

MA-29, CGSBMEQ.GR



Another way to look at the picture is shown here. The "Trend We Wanted" and the "Boom" may have been enabled by the creation of excessive credit to Third World countries. The "True Underlying Trend", from genuine growth in population and economic progress, may not again propel trade until the late 50's.

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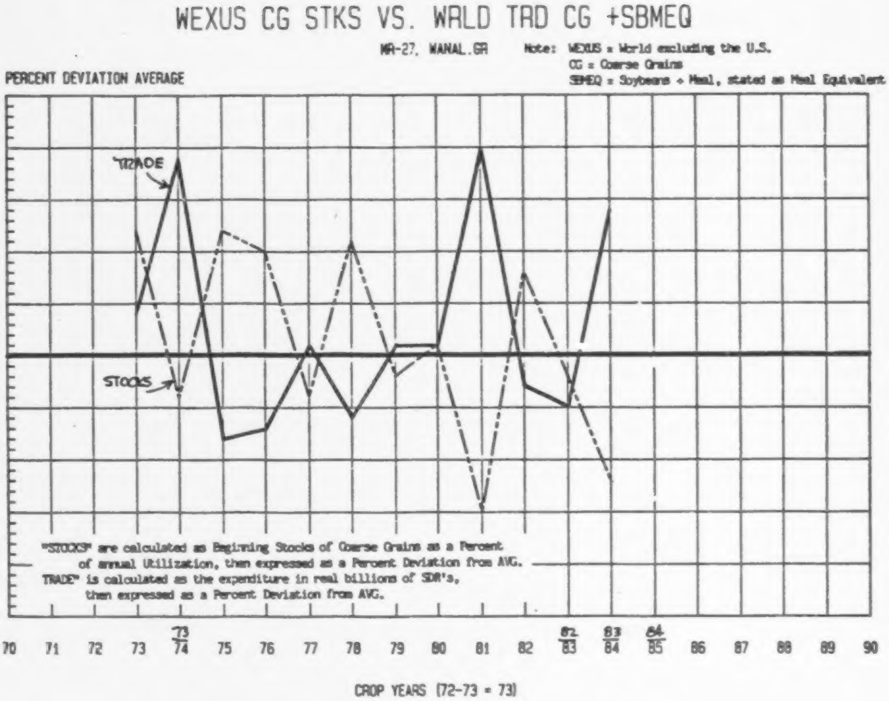

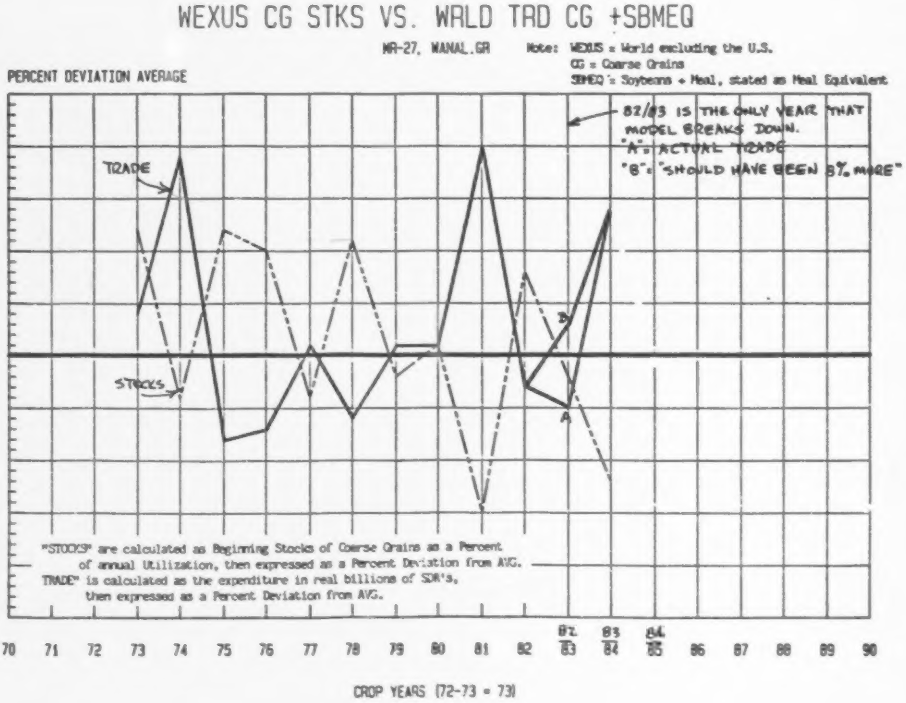

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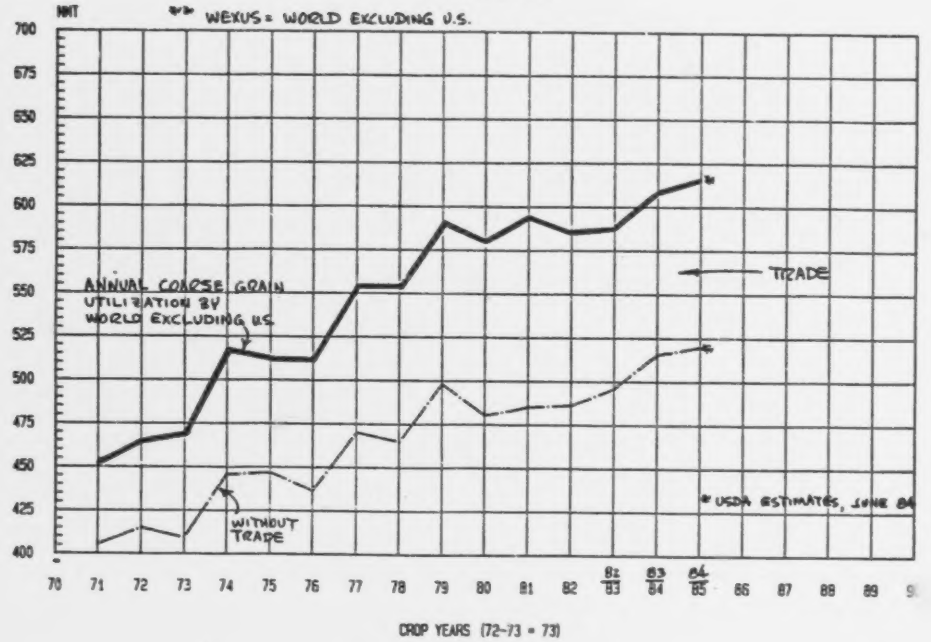
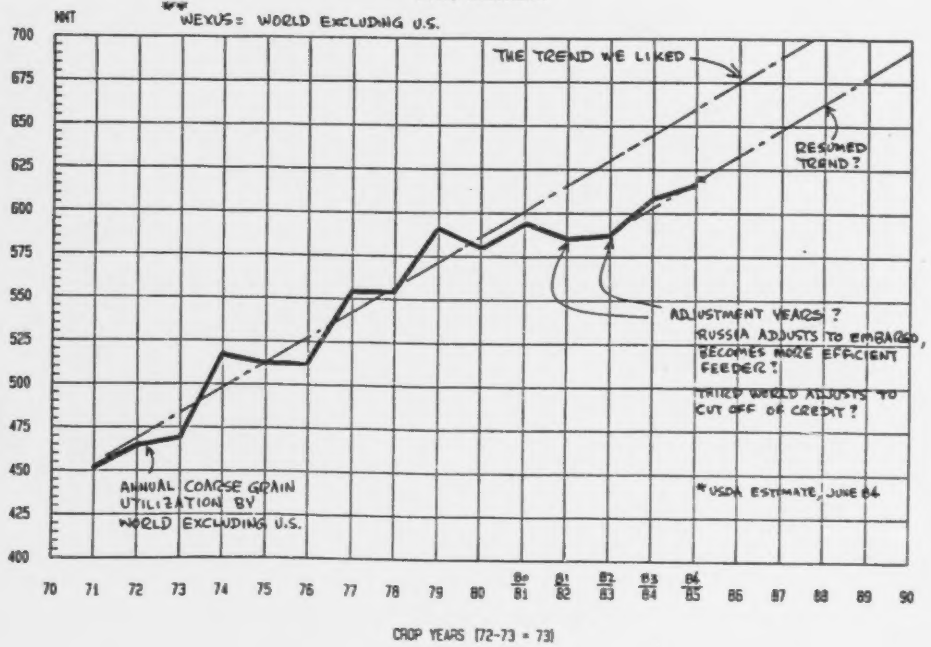


WEXUS** CG UTILIZATION

MA-27, WEXUSUTL.GR



WEXUS** CG UTILIZATION

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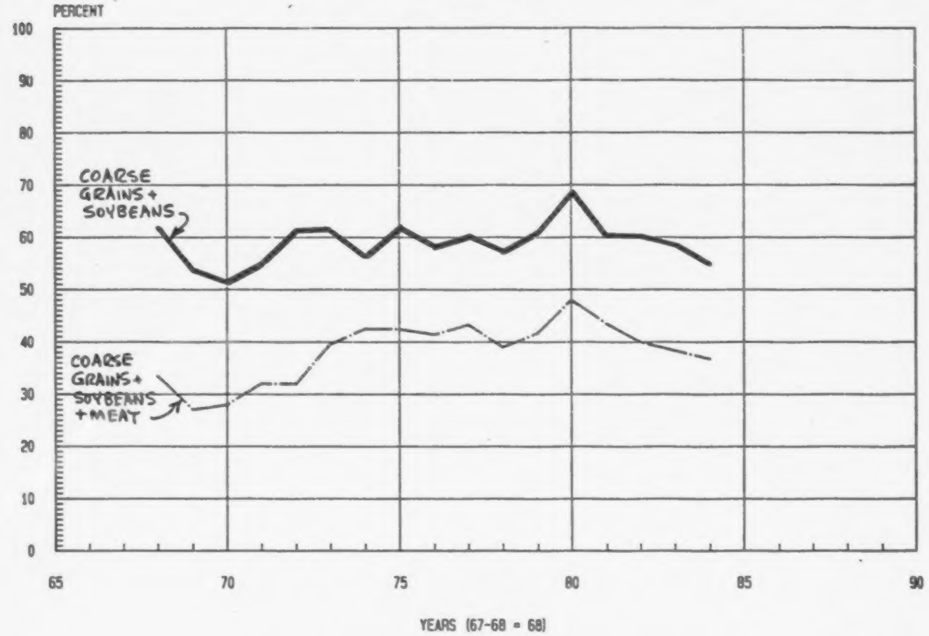
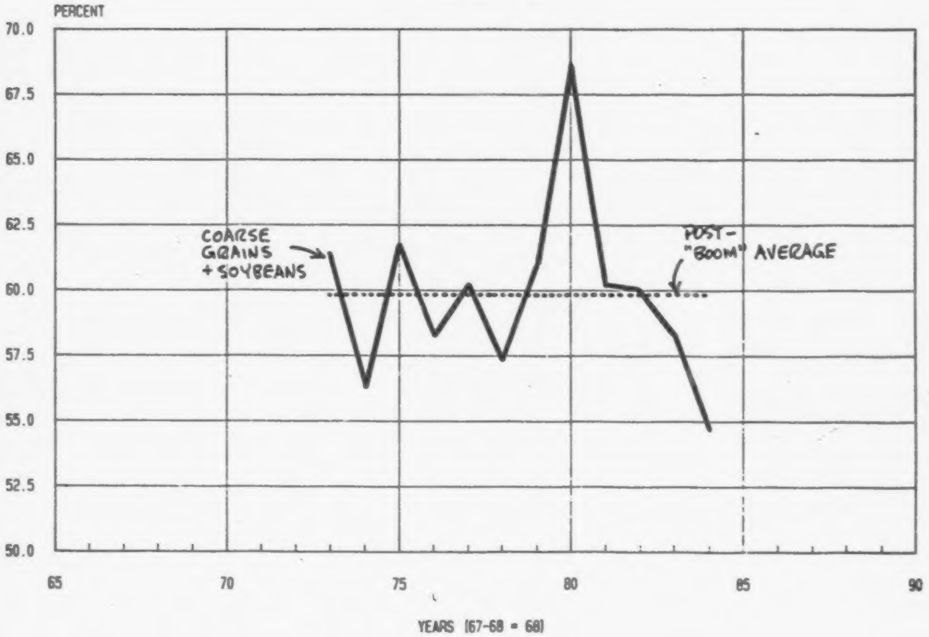
U.S. SHARE OF WORLD TRADE VALUE

MR-29, MEATVALX.GR



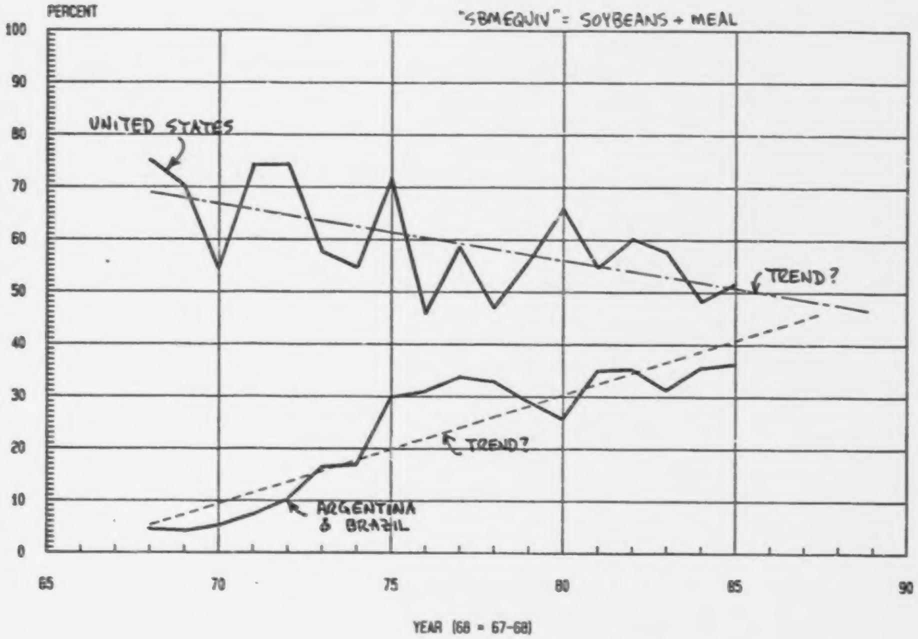
U.S. SHARE OF WORLD TRADE VALUE

MR-29, MEATVALX.GR



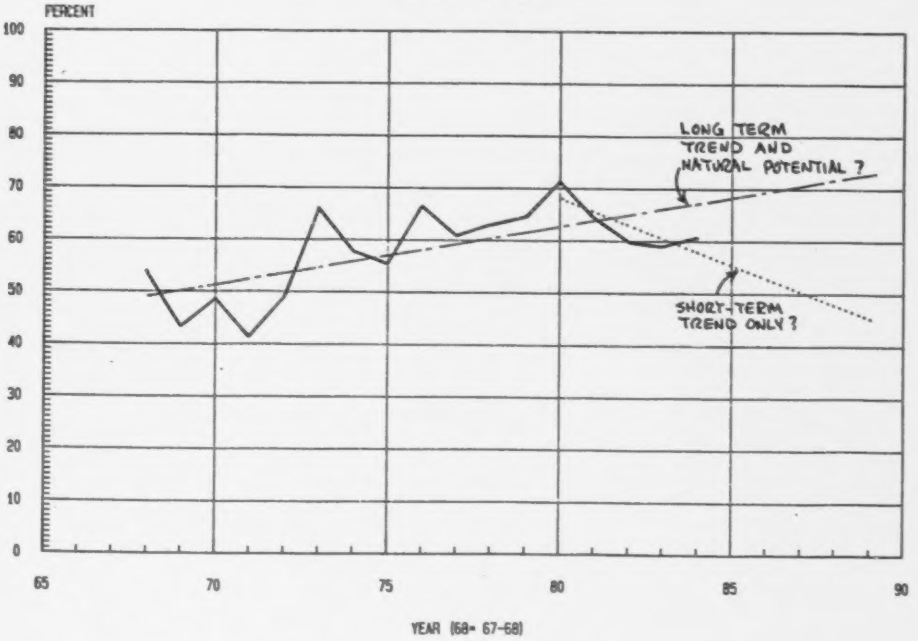
U.S. SHARE OF WORLD TRADE SBMEQUIV TONS

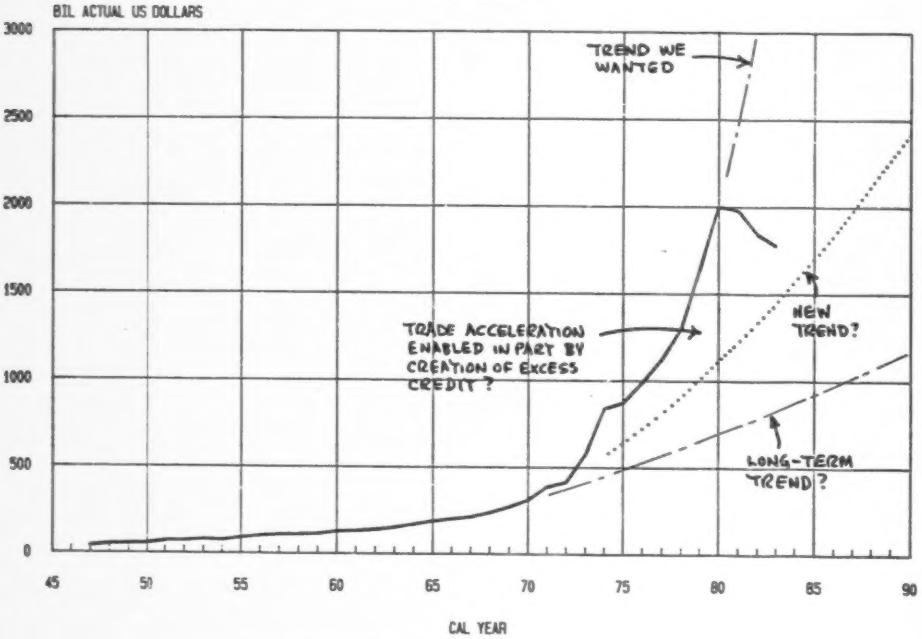
WA-71, SBMEQSHR.GR



US SHARE WORLD TRADE COARSE GRAINS TONS

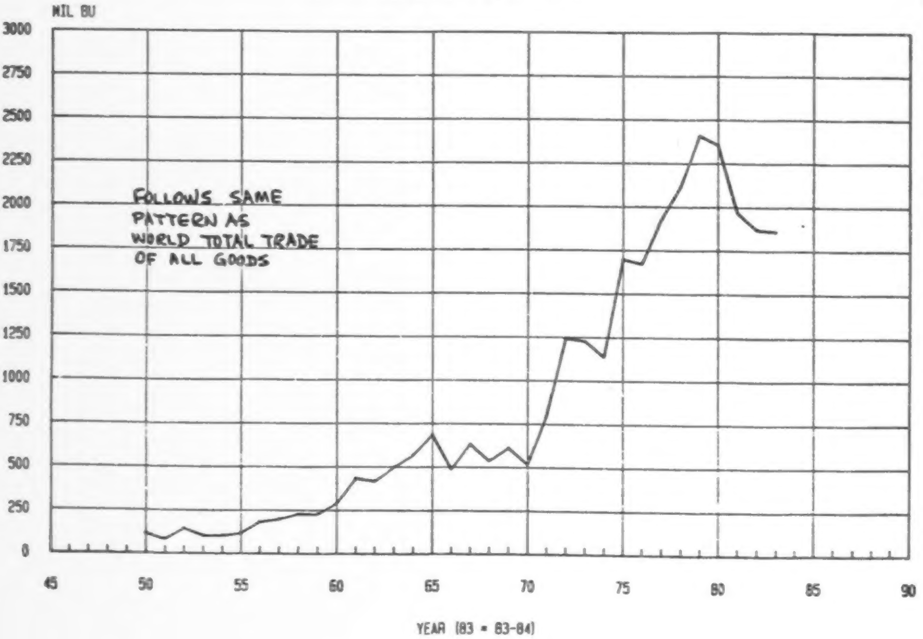
WA-71, USCGSHR.GR





WORLD TOTAL TRADE OF ALL GOODS

MA-58, B:COMP2.GR

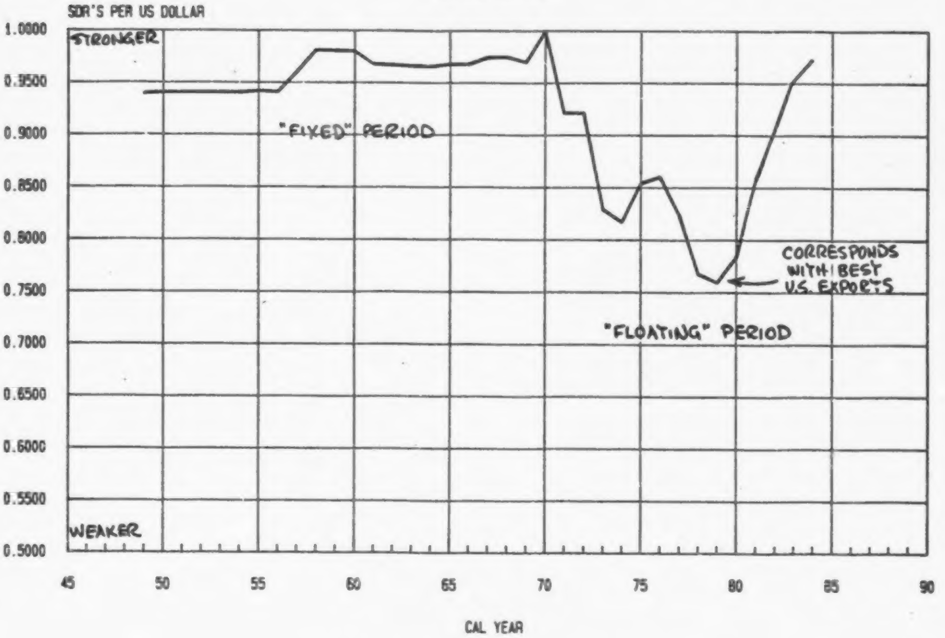


U.S. CORN EXPORTS TO ALL DESTINATIONS

MA-62, CRNHIS.GR, Y = COL 5

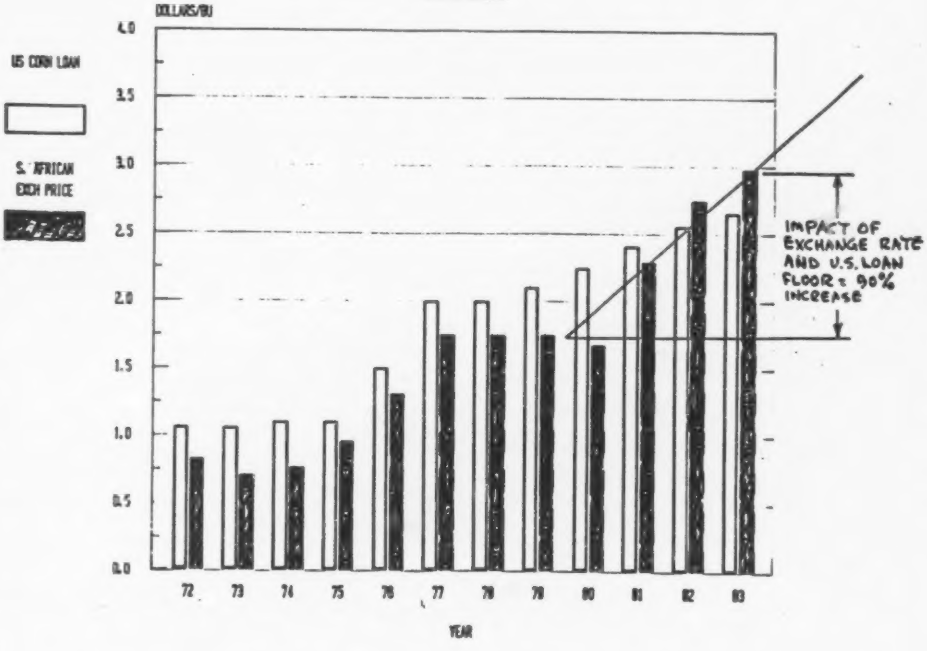
EXCHANGE RATE -- SDR'S PER U.S. DOLLAR

MR-58, SDRYR.GR



US CORN LOAN SEEN BY SOUTH AFRICA

MR-60, LOAN.BR



CREATION OF U.S. DOLLARS VS. CREATION OF EURO-CREDIT (DEBT)

(BILLIONS)

CAL YEAR	BASIC MONEY (M-1) CREATED PER YEAR	BASIC MONEY (M-1) CREATED CUMUL	EURO-CREDIT (NET) CREATED PER YEAR	EURO-CREDIT (NET) CREATED CUMUL	CREDIT CREATED IN EXCESS BASIC MONEY PER YEAR	CREDIT CREATED IN EXCESS BASIC MONEY CUMUL
64		161.8		12		-150
65	8	169.5	2	14	-6	-156
66	4	173.7	3	17	-1	-157
67	11	185.1	4	21	-7	-164
68	14	199.4	7	28	-7	-171
69	6	205.8	14	42	8	-164
70	11	216.5	11	53	0	-164
71	14	230.7	12	65	-2	-166
72	21	251.9	21	86	0	-166
73	14	265.8	32	118	18	-148
74	12	277.5	49	167	37	-111
75	14	291.1	32	199	18	- 92
76	19	310.4	57	256	38	- 54
77	25	335.5	40	296	15	- 40
78	28	363.2	70	366	42	3
79	26	389.0	59	425	33	36
80	25	414.1	123	548	98	134
81	27	440.6	146	694	120	253
82	38	478.2	64	758	26	280
83	43	521.1	50	808	7	287

MRB-8004, 6/21/84 CREATE

FARM INCOME HISTORY
SOURCE: FEDERAL RESERVE BOARD & USDA
H-2, FARMINCM.VC

FARMING AS A PRODUCTION BUSINESS

CAL YEAR	TOTAL RCPTS FROM FRMNG BIL 83$	WAGES PAID BIL 83$	OPRTG COSTS EXCL INTRST BIL 83$	DE-PRECI-ATION BIL 83$	OPRTR LABOR CHRG BIL 83$	OPRTR MNGMT CHRG BIL 83$	INCOME FROM ASSETS BIL 83$	INCOME FROM ASSETS PCT TOTAL RCPTS	GOVT PYMNTS BIL 83$	INCOME FROM ASSETS EXCL GOVT PCT TOTAL	GOVT PYMNTS PCT INCOME FROM ASSETS
1953	111	-9	-43	-10	-36	-4	9	8 %	.7	7 %	8 %
1958	115	-9	-50	-11	-27	-4	14	12 %	3.4	9 %	24 %
1963	118	-10	-56	-12	-23	-4	13	11 %	4.8	7 %	37 %
1968	124	-10	-61	-13	-26	-5	10	8 %	8.7	1 %	87 %
1973	192	-10	-81	-15	-23	-7	56	29 %	5.3	26 %	9 %
1978	171	-12	-84	-21	-21	-7	26	15 %	4.3	13 %	17 %
1983	149	-12	-74	-19	-19	-6	19	13 %	10	6 %	52 %

FARMING AS A REAL ESTATE INVESTMENT BUSINESS

CAL YEAR	INCOME FROM ASSETS BIL 83$	CAPITAL GAIN ON ASSETS BIL 83$	INTRST PAID BIL 83$	CAPITAL GAIN ON DEBT BIL 83$	RETURN FROM EQUITY BIL 83$	ASSETS BIL 83$	DEBT BIL 83$	EQUITY BIL 83$	RETURN FROM EQUITY PCT	DEBT AS PCT EQUITY PCT
1953	9	-23	-2	1	-16	455	49	406	-4 %	12 %
1958	14	33	-3	1	45	480	57	423	11 %	13 %
1963	13	9	-5	1	19	547	82	464	4 %	18 %
1968	10	0	-7	5	8	635	112	522	2 %	21 %
1973	56	88	-9	10	143	715	126	589	24 %	21 %
1978	26	90	-14	13	116	979	171	808	14 %	21 %
1983	19	4	-21	8	12	966	207	759	2 %	27 %

DATA APPENDIX

All quantity data for crops (tonnes, bushels) are from USDA — recent series, as found in FAS Grains, FAS Oilseeds, WASDE.

All crop prices are also from USDA.

Meat quantities and prices from USDA FAS Livestock & Meat.

Exchange rates from IMF Monthly Bulletin.

Population from World Bank.

World trade of all goods from United Nations.

Money Supply (M–1) from US Federal Reserve.

Euro-dollar market size from Morgan Guaranty Bank.

Farm Income from Federal Reserve and USDA.

TOTAL GRAINS & SOYBEANS 7/25/84
MRG-7012, B: GRAINS (M40)
(MIL HA, MT/HA)

	TOTAL GRAINS		SOYBEANS		TOTAL GRAINS & SOYBEANS		AREA QUALITY INDEX	U.S. QUALITY AREA		1979 POP.	U.S. QUALITY AREA PER PERSON	
COUNTRY	AREA	YIELD	AREA	YIELD	AREA	YIELD	U.S.=1.00	MIL HA	SHARE	MIL	HA/PERSON	POP. SHARE
U.S.	76.3	4.3	27.0	2.1	103.3	3.7	1.00	103.3	22.3%	220	0.470	5.2%
CANADA	21.4	2.3	0.3	2.2	21.7	2.3	0.62	13.5	2.9%	24	0.562	0.6%
WE (EC-10)	28.0	4.4			28.0	4.4	1.19	33.3	7.2%	269	0.124	6.3%
EE	28.6	3.3	0.5	1.1	29.1	3.3	0.89	26.0	5.6%	134	0.194	3.2%
USSR	117.3	1.4	0.9	0.5	118.2	1.4	0.38	44.7	9.7%	263	0.170	6.2%
PRC	59.4	2.4	8.0	1.2	67.4	2.3	0.62	41.9	9.0%	965	0.043	22.7%
INDIA	104.1	1.4	0.5	1.0	104.6	1.4	0.38	39.6	8.5%	658	0.060	15.5%
PAKISTAN	9.0	1.8			9.0	1.8	0.49	4.4	0.9%	78	0.056	1.8%
INDONESIA	9.4	3.5			9.4	3.5	0.95	8.9	1.9%	139	0.064	3.3%
THAILAND	11.7	2.0			11.7	2.0	0.54	6.3	1.4%	45	0.141	1.1%
S. AFRICA	7.1	1.6			7.1	1.6	0.43	3.1	0.7%	28	0.110	0.7%
TURKEY	12.6	1.7			12.6	1.7	0.46	5.8	1.2%	44	0.132	1.0%
ARGENTINA	11.7	2.3	2.0	2.0	13.7	2.3	0.62	8.5	1.8%	27	0.315	0.6%
BRAZIL	21.4	1.6	8.4	1.5	29.8	1.6	0.43	12.9	2.8%	123	0.105	2.9%
AUSTRALIA	17.0	1.4			17.0	1.4	0.38	6.4	1.4%	14	0.459	0.3%
	535.0	2.3	47.6	1.8	582.6	2.3	0.62	367.9	79.4%	3031	0.121	71.3%
OTHERS	193.7	1.9	2.7	1.3	196.4	1.9	0.51	100.9	21.8%	1219	0.083	28.7%
WORLD	728.7	2.2	50.3	1.7	779.0	2.2	0.59	463.2		4250	0.109	
JAPAN	2.3	5.6			2.3	5.6	1.51	3.5	0.8%	116	0.030	2.7%

Note: Yield=Prdn/Area

Source: USDA FAS World Crop Production, 1981
Population - 1980 World Bank Atlas

BEST AVAILABLE COPY

WORLD GRAIN TRADE EXPENDITURE
REVISED JULY 17, 1984
MR-30, WRLDEXPD.VC

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
CROP YEAR	USGNP EXPORT DFLTR	EXCH RATE SDR/ US$	WRLD WHEAT TRADE MMT	WHEAT PRICE FOB GULF $/BU	WRLD WHEAT TRADE BIL SDR DFLTD	WRLD COARSE GRAIN TRADE MMT	CORN PRICE FOB GULF $/BU	WRLD COARSE GRAIN TRADE BIL SDR DFLTD	WRLD SBMEQ TRADE MMT	BEAN PRICE FOB GULF $/BU	SBMEQ PRICE US$/ MT	WRLD SBMEQ TRADE BIL SDR DFLTD	WRLD TOTAL TRADE BIL SDR DFLTD	WRLD SBMEQ +CG TRADE BIL SDR DFLTD	WRLD TRADE MMT
71-72	97	.938	52	1.65	3.05	49	1.34	2.50	17.1	3.46	136	2.25	7.80	4.75	118
72-73	100	.862	67	2.5	5.31	59	2.17	4.35	20.2	6.61	288	5.01	14.67	9.36	146
73-74	112.7	.831	63	4.82	8.23	71	3.11	6.41	24.4	6.42	241	4.34	18.98	10.75	158
74-75	134.8	.819	64.3	4.4	6.32	64.9	3.32	5.15	21.9	6.64	236	3.14	14.61	8.29	151
75-76	149.6	.862	66.7	4.11	5.80	75.1	2.98	5.08	26.4	5.52	217	3.30	14.18	8.38	168
76-77	155.3	.862	63.8	3.05	3.97	82.7	2.56	4.63	27	7.73	299	4.48	13.08	9.11	174
77-78	161.9	.817	72.8	3.16	4.27	84	2.63	4.39	32.1	6.61	250	4.05	12.71	8.44	189
78-79	172.6	.774	72	3.84	4.56	90.4	2.88	4.60	35.1	7.56	288	4.53	13.69	9.13	198
79-80	192.5	.766	86	4.7	5.91	99.4	3.11	4.84	39.9	6.86	266	4.22	14.98	9.07	225
80-81	212.9	.827	94.1	4.95	6.65	108.8	3.62	6.02	40	8.03	307	4.77	17.44	10.79	243
81-82	230.8	.889	101.3	4.63	6.64	98.7	2.90	4.34	44	6.69	258	4.37	15.35	8.71	244
82-83	236	.925	98.3	4.33	6.13	91.5	2.92	4.12	45.4	6.26	248	4.41	14.67	8.54	235
83-84	241.8	.95	101.3	4.19	6.13	92.3	3.74	5.34	41.5	7.90	300	4.89	16.36	10.23	235

WORLD COARSE GRAIN STOCKS VERSUS WORLD TRADE OF CG + SBMEQ
WORLD EX U.S. = WEXUS
STOCKS & UTILIZATION FROM USDA FAS GRAINS, TRADE FROM MR-30, WRLDEXPD.
MR-7, WANAL.VC, REVISED 7-18-84.

1 CROP YEAR	2 WRLD CG END STKS	3 US CG END STKS	4 WRLD EX US CG END STKS	5 WRLD CG UTIL	6 US CG UTIL	7 WRLD EX US CG UTIL	8 WRLD EX US CG BEG STKS	9 WRLD EX US CG BGSTK PCT UTIL	10 DEV PCT AVG	11 WRLD CG+SBQ TRADE BILSDR DFLTD	12 DEV PCT AVG	13 WRLD CG TRADE	14 WRLD EX US CG UTIL W/O TRADE
70-71	72.2	32.2	40	593.3	141.8	451.5	43.1	9.55		5.17		46	405.5
71-72	87	46.6	40.4	615.4	151.3	464.1	40	8.62		4.75		49	415.1
72-73	69.9	31.7	38.2	626.9	158.6	468.3	40.4	8.63	12	9.36	4	59	409.3
73-74	65.9	21.8	44.1	673	156.2	516.8	38.2	7.39	-4	10.75	19	71	445.8
74-75	58.9	15.5	43.4	633.6	121.8	511.8	44.1	8.62	12	8.29	-8	64.9	446.9
75-76	58.3	17.3	41	645.6	134	511.6	43.4	8.48	10	8.38	-7	75.1	436.5
76-77	77.5	30	47.5	685.3	131.4	553.9	41	7.40	-4	9.11	1	83.8	470.1
77-78	85.9	41.5	44.4	692	138.3	553.7	47.5	8.58	11	8.44	-6	88.9	464.8
78-79	91.3	46.4	44.9	748.2	157.2	591	44.4	7.51	-2	9.13	1	92.8	498.2
79-80	91.6	52.7	38.9	741	161.4	579.6	44.9	7.75	1	9.07	1	99.4	480.2
80-81	83.6	34.7	48.9	741.2	147.2	594	38.9	6.55	-15	10.79	20	108.8	485.2
81-82	112.8	68.5	44.3	741.8	156.8	585	48.9	8.36	8	8.71	-3	98.7	486.3
82-83	139.4	98.3	41.1	758.6	171.2	587.4	44.3	7.54	-2	8.54	-5	91.5	495.9
83-84	66.7	26.1	40.6	762.3	154.5	607.8	41.1	6.76	-12	10.23	14	92.3	515.5

MR-7, B:MEATVAL.VC. BILSDR OF WORLD MEAT TRADE. WASDE + 050-9 & 050-11.

CROP YEAR	CAL YEAR DESIG	WRLD MEAT EXP 000MT 050-11	PRICE CHOICE STRS $/CWT	PRICE B&G $/CWT	WRLD MEAT BIL$	WRLD POUL EXP 000MT 050-9	PRICE BRLR CTS/LB	WRLD POUL EXP BIL$	WRLD MEAT+ POUL EXP BIL$	USGNP PRICE DFLTR	WRLD MEAT+ POUL BIL$ DFLTD	SDR PER US$	WRLD MEAT+ POUL BILSDR	WRLD MEAT+ POUL BILSDR DFLTD	WRLD CG+SQ TRADE BILSDR DFLTD	WRLD MEAT TRADE BDGT BILSDR DFLTD		WRLD CG+SQ SHR DFLTD BDGT	WRLD WHT TRADE BILSDR DFLTD	WRLD TOTAL GRAIN FOOD BDGT DFLTD	WRLD MEAT BDGT SHR TOTAL
67-68	68	4775	26.87	19.57	2.48	425	27.15	0.25	2.74	83.5	3.28	.981	2.69	3.22	3.52	6.74	67-68	0.52	3.77	10.51	0.64
68-69	69	5168	29.45	24.08	3.08	431	29.06	0.28	3.36	85.5	3.93	1.003	3.37	3.94	3.61	7.55	68-69	0.48	3.33	10.88	0.69
69-70	70	5454	29.36	22.71	3.17	515	26.42	0.30	3.47	88.5	3.92	1.004	3.48	3.94	4.41	8.35	69-70	0.53	3.01	11.36	0.73
70-71	71	5689	32.39	19.11	3.31	579	27.16	0.35	3.66	93.2	3.93	1	3.66	3.93	5.17	9.10	70-71	0.57	3.54	12.64	0.72
71-72	72	6344	35.78	26.67	4.43	594	28.14	0.37	4.80	97	4.95	.93783	4.50	4.64	4.75	9.39	71-72	0.51	3.07	12.46	0.75
72-73	73	6290	44.54	40.27	5.91	609	42.19	0.57	6.48	100	6.48	.86204	5.58	5.58	9.36	14.94	72-73	0.63	5.31	20.25	0.74
73-74	74	5286	41.89	35.11	4.53	671	38.25	0.57	5.09	112.7	4.52	.83084	4.23	3.75	10.75	14.50	73-74	0.74	8.22	22.72	0.64
74-75	75	6024	44.61	48.32	6.15	709	45.07	0.70	6.85	134.7	5.09	.81927	5.61	4.17	8.29	12.46	74-75	0.67	6.34	18.80	0.66
75-76	76	6746	39.11	43.11	6.09	853	40.21	0.76	6.84	149.6	4.57	.86223	5.90	3.94	8.38	12.32	75-76	0.68	5.8	18.12	0.68
76-77	77	7289	39.53	39.51	6.35	1010	40.81	0.91	7.26	155.2	4.68	.86209	6.26	4.03	9.11	13.14	76-77	0.69	3.97	17.11	0.77
77-78	78	7645	49.25	46.3	8.08	1036	44.54	1.02	9.10	161.9	5.62	.81732	7.43	4.59	8.44	13.03	77-78	0.65	4.26	17.29	0.75
78-79	79	7629	64.64	45.9	9.46	1191	44.41	1.17	10.62	172.6	6.15	.77451	8.23	4.77	9.13	13.90	78-79	0.66	4.56	18.46	0.75
79-80	80	8006	67.38	37.53	9.52	1439	46.84	1.49	11.01	192.5	5.72	.76606	8.43	4.38	9.07	13.45	79-80	0.67	5.92	19.37	0.69
80-81	81	8427	65.18	45.4	10.46	1837	46.39	1.88	12.34	212.9	5.79	.82765	10.21	4.80	10.79	15.59	80-81	0.69	6.66	22.25	0.70
81-82	82	8394	64.22	55.44	11.16	1736	40.47	1.55	12.70	230.8	5.50	.88925	11.30	4.89	8.71	13.60	81-82	0.64	6.65	20.25	0.67
82-83	83	8837	62.52	47.71	10.88	1730	49.75	1.90	12.78	236	5.42	.925	11.82	5.01	8.54	13.55	82-83	0.63	5.98	19.53	0.69
83-84	84	8995	67	54	12.13	1683	59	2.19	14.32	241.8	5.92	.95	13.60	5.63	10.23	15.86	83-84	0.65	6.06		

MR-29, MEATVALX.VC U.S. SHARE OF WORLD MEAT BUDGET FROM MR-7, MEATVAL.VC

															①	②	③
	US MEAT EXP 000MT	US MEAT EXP BIL$	US POUL EXP 000MT	US POUL EXP BIL$	US MEAT+ POUL EXP BIL$	US MEAT+ POUL EXP BIL$ DFLTD	US MEAT+ POUL EXP BILSDR DFLTD	US CG EXP MMT	CORN PRICE FOB GULF $/MMT	US SBMEQ EXP MMT	SBMEQ PRICE FOB GULF $/MMT	US CG+ SBMEQ EXP BIL$	US CG+ SBMEQ EXP BILSDR DFLTD	US CG+ SBMEQ SHR WRLD PCT	US CG+MEQ +MEAT SHR WRLD PCT	CAL YEAR DESIG
67-68	61	0.03	66	0.04	0.07	0.09	0.08	21	48	7.66	110	1.85	2.17	62	34	68
68-69	87	0.05	59	0.04	0.09	0.10	0.11	16	51	7.86	106	1.65	1.93	54	27	69
69-70	50	0.03	62	0.04	0.07	0.07	0.07	19	56	8.55	109	2.00	2.26	51	28	70
70-71	60	0.03	59	0.04	0.07	0.08	0.08	19	61	12.4	120	2.65	2.84	55	32	71
71-72	83	0.06	65	0.04	0.10	0.10	0.10	24	53	12.74	136	3.00	2.90	61	32	72
72-73	141	0.13	72	0.07	0.20	0.20	0.17	39	85	11.63	288	6.66	5.75	61	40	73
73-74	109	0.09	78	0.07	0.16	0.14	0.12	41	122	13.32	241	8.21	6.05	56	43	74
74-75	164	0.17	95	0.09	0.26	0.19	0.16	36	131	15.72	236	8.43	5.12	62	42	75
75-76	236	0.21	183	0.16	0.38	0.25	0.22	50	117	12.09	217	8.47	4.88	58	41	76
76-77	236	0.21	189	0.17	0.38	0.24	0.21	51	101	15.83	299	9.88	5.49	60	43	77
77-78	257	0.27	194	0.19	0.46	0.29	0.23	56	104	15.06	250	9.59	4.84	57	39	78
78-79	211	0.26	230	0.23	0.49	0.28	0.22	60	113	19.65	288	12.44	5.58	61	42	79
79-80	195	0.23	322	0.33	0.56	0.29	0.22	71	122	26.33	266	15.67	6.23	69	48	80
80-81	240	0.30	380	0.39	0.69	0.32	0.27	70	143	21.86	307	16.72	6.50	60	43	81
81-82	213	0.28	264	0.24	0.52	0.22	0.20	59	114	26.54	258	13.57	5.23	60	40	82
82-83	225	0.28	227	0.25	0.53	0.22	0.21	54	115	26.21	248	12.71	4.98	58	38	83
83-84	229	0.31	208	0.27	0.58	0.24	0.23	56	147	20.01	300	14.24	5.59	55	37	84

LATIN AMERICA SHARE WORLD SBMEQ EXPORTS
WRLD FROM MR-30, WRLDEXPD.VC. BRZL FROM MR-60, BRAZIL.VC.
ARGTN FROM MR-60, ARGEN.VC. US FROM MR-29, MEATVALX.VC
MR-71, SBMEQSHR.VC

CROP YEAR	CAL YEAR REF	WRLD SBMEQ EXP MMT	BRZL SBMEQ EXP MMT	BRZL SHR WRLD PCT	ARGTN SBMEQ EXP MMT	ARGTN SHR WRLD PCT	BRZL+ ARGTN SHR WRLD	US SBMEQ EXP MMT	US SHR WRLD PCT	US+ BRZL+ ARGTN SHR	OTHRS SHR WRLD PCT
67-68	68	10.2	.47	5		0	5	7.66	75	80	20
68-69	69	11.2	.47	4		0	4	7.86	70	74	26
69-70	70	15.7	.83	5		0	5	8.55	54	60	40
70-71	71	16.7	1.24	7		0	7	12.4	74	82	18
71-72	72	17.1	1.78	10		0	10	12.74	75	85	15
72-73	73	20.2	3.34	17		0	17	11.63	58	74	26
73-74	74	24.4	4.04	17	.1	0	17	13.32	55	72	28
74-75	75	21.9	6.46	29	.1	0	30	15.72	72	102	-2
75-76	76	26.4	7.98	30	.25	1	31	12.09	46	77	23
76-77	77	27	8.66	32	.48	2	34	15.83	59	92	8
77-78	78	32.1	9.59	30	.96	3	33	15.06	47	80	20
78-79	79	35.1	7.77	22	2.42	7	29	19.65	56	85	15
79-80	80	39.9	7.1	18	3.16	8	26	26.33	66	92	8
80-81	81	40	10.96	27	3.05	8	35	21.86	55	90	10
81-82	82	44	12.64	29	2.93	7	35	26.54	60	96	4
82-83	83	45.4	10.59	23	3.62	8	31	26.21	58	89	11
83-84	84	41.5	11.81	28	3.01	7	36	20.01	48	84	16
84-85	35	43.5	11.87	27	4	9	36	22.5	52	88	12

MR-71
USCGSHR
.VC

CROP YEAR	CAL YEAR (REF)	US EXPT CG MMT	WRLD TRD CG MMT	US PCT
67-68	68	21	39	54
68-69	69	16	37	43
69-70	70	19	39	49
70-71	71	19	46	41
71-72	72	24	49	49
72-73	73	39	59	66
73-74	74	41	71	58
74-75	75	36	64.9	55
75-76	76	50	75.1	67
76-77	77	51	83.8	61
77-78	78	56	88.9	63
78-79	79	60	92.8	65
79-80	80	71	99.4	71
80-81	81	70	108.8	64
81-82	82	59	98.7	60
82-83	83	54	91.5	59
83-84	84	56	92.3	61

AGENCY FOR INTERNATIONAL DEVELOPMENT—POLICY STATEMENT

(Bureau for Private Enterprise)

INTRODUCTION

The mandate of the Agency for International Development is to meet basic human needs in developing countries by helping those countries achieve broadly based, equitable, and self-sustaining economic growth.

Aside from the fact that a large volume of U.S. goods and services are procured from U.S. suppliers in the performance of that mandate, AID is not directly charged with promoting U.S. exports or supporting U.S. business activity overseas. Other agencies of Government have those functions. It should be emphasized, then, that the relevance of AID development assistance programs to the committee's present concerns lies in the indirect, long-term probable impact of these programs on American business and agricultural interests abroad. This impact includes the following:

First, under its private sector initiative, the agency encourages a policy and institutional framework in host countries in which market forces and competitive enterprise can function effectively. This helps to provide an improved climate overseas for the United States as well as indigenous business activity.

Second, a major objective of the private sector initiative is to strengthen Third World private businesses. This often has the effect of building increased demand and a broader customer base among those businesses for U.S. products, services, and technology.

Third, certain AID activities designed to promote agricultural and agribusiness development in Third World countries also help to bring together American and indigenous entrepreneurs in these fields so they may pursue mutually beneficial business ventures. This frequently leads to expanded markets for U.S. exports and increased U.S. investment opportunities.

With these parameters in mind, the Bureau for Private Enterprise is pleased to submit this statement for inclusion in the committee print on U.S. agricultural exports and farm policy. The statement will describe AID's private sector initiative, discuss its implementation by the Bureau, and provide selected examples of activities that illustrate the three points just mentioned.

PRIVATE SECTOR INITIATIVE

Description

AID's private sector initiative was inaugurated in 1981. Its purpose was, and remains, to emphasize the value of market forces in Third World development, including the efficient allocation of resources, and to mobilize those forces in designing and implementing U.S. foreign assistance programs.

The fact that private sector programs constitute one of four cornerstones on which present AID strategy is based is evidence of the importance currently placed on them. At the same time, private sector programs cut across and reinforce the other three, serving also as mechanisms for carrying out those activities. The other cornerstones are policy dialog, the building of self-sustaining institutions, and technology transfer.

Importance of agribusiness

While the private sector initiative is not focused on only one sector—rather, it is a means for achieving development payoff along a gamut of sectors—agribusiness has received special attention from the outset. This is because of its importance as a development priority in many countries and of AID's considerable experience in agriculture-related activities.

Agribusiness provides farmers with seeds and fertilizers and new markets for their production. Demand for diversified output then works back from market to farm. Such activities, combined with the right policy climate, can lead to agricultural self-sufficiency, helping break Third World dependence on transfer of food and other resources from developed nations.

Rationale

Certain realities of Third World experience provide the rationale for the private sector initiative in foreign aid.

One reality is the persuasive evidence that those developing nations which have relied on market forces for growth have, by and large, registered impressive economic gains. Conversely, many of those choosing to manage and direct their economies primarily through the public sector have fared less well.

Another reality is a changing attitude in other parts of the developing world. Recent severe economic problems—mounting debt-service burdens and reduced demand and falling prices for traditional exports—have led many Third World leaders increasingly to reexamine their development philosophies and take corrective action. This has meant a shifting away from Government control of the economy toward more reliance on the private sector.

Finally, the decline, in real terms, of official aid levels from the United States and other donor countries has confronted both developed and developing nations with the need to enlist other resources and skills to keep the development process on track, including resources and skills on the private sector.

Elements common to Third World success stories include these: The right policy climate to mobilize private capital and direct allocation of that capital efficiently and equitably; a financial structure to help match sources of capital with productive uses of capital;

and the development of managerial and technical skills to ensure that the invested capital base leads to increased production and appreciates in value. Experience shows that these elements not only spur economic progress, they also build a resiliency into the economy so that affected nations can better weather the impact of world recession, falling commodity prices and demand, and other factors over which they have limited control.

BUREAU FOR PRIVATE ENTERPRISE

Two roles

The Bureau was established in July 1981 to spearhead AID's private sector initiative. It has two broad roles, those of innovator and educator.

As innovator, the Bureau devises and participates in new projects and programs that energize Third World private enterprise as a major force for broadly based, equitable, and sustained growth. These typically attract private resources, both indigenous and American, thus multiplying the impact of limited AID funds. The leveraging ratio for major investments exceeds three outside dollars for each AID dollar.

Bureau financing is on near-market terms. This is based on the premise that private Third World agribusinesses and other enterprises will be stronger—and thus better able to contribute to development—if they can compete in the marketplace without subsidy. The approach differs from the concessional terms of government-to-government AID loans.

As educator, the Bureau helps make the private sector initiative agencywide. One way this is achieved is through the Bureau's mission support program. This provides AID missions, at their request, with needed expertise in designing and implementing private sector programs in the field and aiding host governments in building a climate for business. In its first year, the Bureau assisted five missions. In the second year, requests from 20 missions were answered and 30 assignments made. By mid-1984, the Bureau had assisted 30 missions by sending outside specialists or its own staff on more than 80 separate assignments.

Experimental nature

The roles of innovator and educator point up the Bureau's experimental, or laboratory nature. Its projects are often designed as models that can be replicated elsewhere in the field. For that reason, the Bureau's budget is maintained at a modest level, currently about $26 million—not including activities of the Office of Housing and Urban Programs—and its staff, recuited in part from the U.S. private sector, at less than 45. Additionally, to avoid spreading resources too thin, the Bureau has identified only four countries in Latin America and the Caribbean, four countries in Asia. Four in Africa and one country in the near East for its major programming. Mission support activities go beyond this target list. Projects with exceptional development impact are also occasionally undertaken in other countries.

PRIVATE SECTOR REVOLVING FUND

A major step in institutionalizing AID's private sector initiative was marked with enactment by Congress in November 1983 of the statute authorizing creation of the private sector revolving fund. This puts Bureau loans, largely in agribusiness, on a flexible, businesslike and self-replenishing basis. Appropriations through fiscal year 1986 will build the fund to an approximate $60 million level. Bureau loans after that will be funded through repayments, fees and other income. Revenues beyond $100 million will revert to the U.S. Treasury.

Strategy

The Bureau has drawn on lessons learned from Third World success stories in shaping its four-part strategy. The strategy is:

1. Removal of constraints to the development of private enterprise in host countries. These include adverse policies, laws, and regulations, deficiencies in local capital markets, shortage of technical, vocational, and entrepreneurial skills, and lack of technology;
2. Provision of credit, sometimes directly to Third World businesses but more often to capitalize or expand intermediate institutions that provide loans, equity, and other services to small- and medium-sized enterprises;
3. Support for the development of agribusiness, an important source of markets, employment and income in Third World countries—health and commercialization of technology are two new areas added in fiscal year 1984—and, as mentioned earlier.
4. Support and encouragement to AID missions.

In implementing this strategy, the Bureau has concentrated on activities that fully support the congressional mandate to improve the lives of the poor majority in AID-assisted countries. Their emphasis is on job creation and income expansion—especially in labor-intensive smaller enterprises in rural areas—human resources development through skills training, and self-help host country policies that best promote self-propelling, equitable growth reaching the largest number of people. Such results can lead to healthy and expanding markets for U.S. agricultural and other exports, which develop most rapidly in countries enjoying sustainable economic growth and the political stability that frequently accompanies that growth.

EXAMPLES OF BUREAU ACTIVITIES

This final section will describe selection Bureau activities that, while not specifically undertaken to develop U.S. export markets, may have that secondary effect. As discussed earlier, these activities are in three categories: Creating a policy and institutional framework for private enterprise; strengthening Third World private entrepreneurs; and promoting agribusiness development through the encouragement of U.S. and indigenous business interaction.

Policy and institutional framework

Regarding policy, AID has increasingly used policy dialog with host governments to influence and improve the legal and regulatory framework of host countries.

Agriculture/agribusiness is obviously the subject of a large part of this dialog. Agriculture provides livelihood for rural populations, food for city dwellers, and commodities to earn needed foreign exchange. With the emphasis in AID on private enterprise development, an appropriate policy framework to be sought is one that relies largely on free markets, adequate production incentives and fair access to credit and other resources.

The Bureau for Private Enterprise contributes to policy dialog through its mission support activities. Experts funded by the Bureau, for example, have recommended to the Government of Kenya improvements in that country's laws affecting investments in agribusiness and other areas. Bureau staff also established an overall strategy for AID support for the development of private enterprise in Grenada, which, again, stimulates agribusiness growth.

Another policy-dialog activity centers on state-owned enterprises, or parastatals. The Bureau has engaged U.S. accounting firms to conduct audits of state enterprises in two Latin American countries. This is the first step in formulation of strategies to privatize such enterprises through public sale of shares or other means. In June, the Bureau made a loan to continue operations of an estate farm historically owned by the Malawi Government. The farm, which lost money and has been in receivership, has attracted U.S. and local private investors. The Bureau will play an active role in this changeover of ownership and subsequent improvements in crop yields and employment. The project is expected to open up opportunities for U.S. trade.

The institutional framework is vital to the implementation of realistic policies made at the top. For example, in carrying out policies that encourage private enterprise development, institutional mechanisms are necessary to mobilize private capital and match it to productive uses. This capital and credit market development is a major Bureau activity.

AID has long been involved in establishing and investing in capital-generating mechanisms but the emphasis has been on public rather than private institutions. The Bureau is broadening agency experience to include private entities, which often respond more quickly to commercial opportunities. The instruments are Bureau loans—at market or near-market rates as mentioned earlier—to create new institutions or to lead existing institutions in new directions. Example of the former is a Bureau loan under consideration to help establish Pakistan's first independent leasing firm. It would be used as a mechanism to deliver credit to small local businesses in agriculture and other industries. Examples of the latter are Bureau loans to Siam Commercial Bank and Kenya Commercial Bank. Both loans are earmarked for a type of client not normally cultivated by these banks—the small- and medium-sized rural entrepreneur who needs medium- to long-term credit at fixed rates to start up or expand.

Strengthening Third World entrepreneurs

Medium- and small-scale enterprises served by the Siam and Kenya banks represent a great growth potential in Third World economies and thus are a factor in the eventual expansion of U.S. export markets, and the strengthening of potential joint ventures with U.S. partners.

Loans disbursed by the first institution—from a fund financed equally by AID and the bank—have led thus far to creation of 144 full-time and 263 part-time jobs in rural Thailand. The second bank, also using a fund matched equally by itself and AID, has disbursed loans leading to some 460 jobs. Through creation of new markets and advisory services for farmers, the fund eventually will benefit a total of 128,000 rural Kenyans.

Other Bureau investments include an agribusiness loan pool to serve customers in Sri Lanka and, later, elsewhere in Asia and the Near East; a development bank in the Dominican Republic to provide credit for producers of nontraditional exports; a shrimp farm in Antigua; a tannery in Kenya; a machinery firm in Pakistan. Each is aimed at strengthening the small- and medium-sized enterprise, especially in agribusiness, that cannot secure credit needed for growth locally. Increased demand for U.S. products, technical and managerial assistance, and services is expected as this important sector gains strength.

Promoting agribusiness development

In carrying out support for the development of agribusiness, one element of the Bureau's four-part strategy, the Bureau serves to bring together American and Third World business people.

The Bureau has drawn on U.S. business planning, marketing, and training skills at all phases of its program. This has included the financing of private sector reconnaissance teams to target countries to identify constraints to, and opportunities for, private enterprise development.

Additionally, Bureau personnel may serve as ad hoc. Informal contacts for Third World and American entrepreneurs. The staff has broad experience in energizing business activity abroad and counts many years of collective experience both in private industry and Government. Staff guidance in obtaining information provides an informal service that can lead to joint ventures, trading, licensing, franchising, and other commercial arrangements with Third World counterparts.

The Bureau commissioned SRI International to conduct an analysis to determine which investment promotion programs undertaken by countries work and which do not. Agribusiness investments are a major emphasis of this analysis, which will provide guidance to Third World governments and AID missions.

The Bureau provides partial financial support for the Joint Agricultural Consulative Corporation [JAC Corp.]. This private agribusiness group has set up committees in four Third World countries and expects to establish committees in eight or nine others. The United States and local members identify investment opportunities, exchange information, work on business-to-Government policy dialog and serve as conduits for technology transfer. U.S. export market-building is a natural outgrowth of this mechanism.

A concept being pioneered by the Bureau illustrates how agribusiness/farmer teamwork can lead to striking development payoff. This is the organization of small farmers around a core business that provides hands-on managerial, marketing, and technical services.

The Bureau commissioned Business International, a New York-based corporate research and public policy firm, to survey models of this approach in nine developing countries. Core firms ranged from multinationals to very small businesses, both indigenous and foreign (including United States) or joint ventures between the two.

The case histories showed that the concept not only works but is often the spark needed to move small farmers from subsistence to cash crops. For the farmer, the arrangement offers assured markets, higher income, a stimulus to further production and needed extension services. For the company, it usually means faster than usual earnings, plus assured supplies to meet contractual obligations.

Summing up the potential of this agribusiness/small farmer synergism the study commented:

> There are today approximately one billion small farmers in the developing world. If * * * the income of these farmers were raised by only $100 per year, the stimulative effect on the global economy would be staggering, with multiplier effects not only for agricultural output, but for manufactured goods and services as well, both in the developing countries and in the industrialized world.

CONCLUSION

The Bureau for Private Enterprise appreciates having the opportunity of submitting this statement to the Committee on Agriculture, Nutrition, and Forestry. We hope that it will serve to inform the committee of progress made under the private sector initiative of the U.S. foreign assistance program and relate the potential benefits of this initiative to the continuing development of American agricultural and other export markets.

MAKING U.S. AGRICULTURAL POLICY MARKET-ORIENTED

(By Robbin S. Johnson, Cargill, Inc.)

INTRODUCTION

The 1985 farm bill will be a watershed for American agriculture. Without a shift to more market-oriented policies, U.S. agriculture will continue to stagnate. But a shift to market-based policies can rekindle a more dynamic farm economy and stronger export performance.

The policy choices made in 1985 will make a difference in the size of the market U.S. farmers can serve. This paper argues that a market-based policy will increase average annual grain exports 20–30 million tons in the next few years compared to continuing current policies. It also outlines what such a market-based policy should include.

THE IMPORTANCE OF MARKETS

Farm bills traditionally have been discussed in terms of their impact on farmer welfare. The farmer is central to a healthy agriculture, and a farm policy that does not serve the farmer's interests will fail.

But a lot more is at stake in choosing an agricultural policy direction today. Farm policy sets the orientation for one-fifth of total U.S. economic activity and an equal share of the world food economy. It also is only one tool among a broad range of fiscal, monetary and trade policy decisions that will set the environment for U.S. agriculture. For maximum effectiveness, those policies must work in concert to restore agricultural prosperity.

For this reason, U.S. farm policy must fit into and reinforce trends of national and international scope. At the national level, the U.S. economy has always been fundamentally market-based, and markets rather than governmental management will continue to guide its development.

Internationally, the role of markets is currently less dominant, but policy is moving toward greater reliance upon market forces, especially in the world food economy. Trade accounts for a growing share of the world food use. Developing countries are moving toward market-based agricultural policies to accelerate growth in production, employment and incomes. And developed countries are being pushed by mushrooming costs to reduce excessive governmental protection of agriculture.

So, while in theory U.S. farm policy could revert to greater reliance on governmental controls, in reality policy must move toward greater reliance on markets. Agriculture cannot afford to isolate itself from the market-based remainder of the domestic economy, and it cannot afford to swim against the tides running in the world food economy.

PUTTING MARKETS TO WORK

This policy shift will not be easy or painless. There is reluctance in some quarters to accept the challenge of competition markets pose. Competition involves uncertainty and the risk of failure as well as success.

But the notion that governmental management of agriculture can guarantee farmers high returns is an illusion. The United States lacks the resources and the control over the actions of others to manage markets in this way, even if the political will to try existed.

More importantly, modern American agriculture is better suited than any other food-producing system to profit from a competitive environment. It has abundant land and favorable climatic resources. American farmers are the best-educated, best-informed, and best-equipped to manage risks. And, they are served by the world's most modern input-supply and product-marketing industries, both of which currently have large excess capacity.

Putting these strengths to work can unlock enormous potential for growth. After all, the United States has long had the natural endowments to be a major agricultural exporter. But that potential was not unleashed until the protective, interventionist grain policies of the 1930's, 1940's, and 1950's were replaced with more market-oriented programs in the mid-1960's.

That shift to a market-based farm policy encouraged food importers to depend upon U.S. productive efficiency rather than their high-cost self-sufficiency. In a brief span of time, world grain trade doubled, U.S. exports trebled and the value of farm exports jumped sevenfold.

That momentum was lost in the first half of the 1980's under the impact of recession, a debt crisis, a strong dollar, an ill-considered embargo and inflexible domestic farm policies.

That damage needs to be undone, and the process will involve some pain. A return to a market-oriented farm policy will result initially in lower prices and greater supplies.

But the process begins rather than ends there. Abundant supplies will stimulate additional growth in world consumption. A half-percent increase in the annual rate of growth in world grain use can mean a 5- to 8-percent annual increase in U.S. grain exports. This is the market multiplier that a shift to market-oriented policies put to work for the United States during the 1970's. A return to market-based policies in 1985 would put it to work again.

To put this point another way, market-based U.S. farm policies could boost projected export growth to developing and centrally planned economy countries 50 percent by 1990. It also could cut projected competitive export growth in half. The result is the potential for U.S. grain exports to be 20 to 30 million tons higher annually by 1990 than under a continuation of current policies.

To conclude, the farm policy decisions to be made in 1985 will make a big difference in shaping agriculture's future. Because of the multipliers at work throughout the world grain economy, a shift from current policies to a market-oriented U.S. farm policy can turn lackluster U.S. export prospects back into a dynamic market.

USING FARM POLICY TO UNLOCK MARKET POTENTIAL

It is wrong to consider farm policy choices apart from their effects on commercial demand. A policy that boosts prices artificially and defends them through controls on production or sales will constrict the market for U.S. farm products. By contrast, a policy that restores U.S. competitiveness will end up enlarging the market. It is important to understand how that process would work.

Export demand in today's global food and fiber economy is now highly responsive to U.S. policies. A shift to lower and more flexible U.S. commodity price support policies will increase total farm income from those commodities. It will do so by stimulating demand and discouraging competitive output growth.

This means that the size of the market for U.S. farm products is a function of its farm policies. Those markets will, of course, continue to be shaped by traditional factors—population growth, income levels, weather. And, they are influenced by macroeconomic forces—world economic performance, foreign exchange and inflation rates, levels of political tension.

But these traditional and macroeconomic factors—however important—are largely impossible for agricultural interests to control. Those interests can, however, shape U.S. farm policies. While U.S. farm policies cannot overcome adverse developments in these broader arenas, such policies determine how effectively American farmers exploit the opportunities they have.

U.S. farm policy since the New Deal generally has locked U.S. agriculture into the role of residual supplier to world markets. Nonrecourse loans have maintained a predictable floor under market prices. Government or farmer-owned reserve stocks have soaked up excessive supplies rather than encouraging their consumption. And supply management programs have reduced U.S. farm output but not the production of its competitors.

This was the orientation of U.S. farm policy in the 1950's and early 1960's, and it has been that way essentially since 1981 also.

A policy that makes the United States a residual supplier runs up farm program costs but not farm incomes. Such a policy, however, is appealing to other exporters, who get a free ride. They capture the benefits of the U.S. price umbrella. They also get a bonus—U.S. farmers idle cropland while foreign producers are free to plant all of theirs. The unavoidable result of a residual supplier policy is slippage in market share and stagnation in price, income and land use.

The United States temporarily broke out of this residual supplier policy profile in the 1970's, when that decade's export boom lifted markets above Government program levels. In this period, U.S. grain exports more than doubled, the U.S. share of total world trade rose from 40 to 60 percent and farmers generally prospered. This is the magic of the marketplace that needs to be rekindled.

If the United States continues its current residual supplier policy for wheat and feed grains,[1] that dynamism is unlikely to return. Instead, Cargill projects the following trade scenario by 1990 under continuation of current policies:

[Million metric tons]

	1980-81	1985-86	1990-91
Wheat:			
United States	41.9	34.3	39.2
Canada	17.0	21.5	23.0
Australia	10.6	13.0	15.0
Argentina	3.9	9.0	12.5
European Community	14.7	18.0	23.0
Others	6.2	5.8	4.6
Total	94.3	101.6	117.3
Feed grains:			
United States	69.2	54.0	72.3
Canada	5.5	9.0	9.0
Australia	2.2	4.5	5.0
Argentina	14.1	12.2	14.2
South Africa	4.0	2.0	2.5
European Community	5.6	7.5	6.5
Others	7.2	7.4	6.9
Total	107.8	96.6	116.4

The recent stagnation in world grain trade can be seen by contrasting total trade in 1980-81 with 1985-86. As the comparison suggests, the stagnation will continue through the balance of the 1981 farm bill, unless there is a major crop shortfall somewhere.

In the last half of the 1980's, total trade will begin to grow again, but the rate of growth will be moderate. The reason is that a residual supplier policy in the United States tends to discourage growth in consumption and in reliance on imports among current and potential customers. They use less and try to produce more domestically, so a U.S. residual supplier policy slows down demand growth and shrinks the portion of world grain use met by imports. Feed grain trade is particularly hard hit by these effects of a residual supplier policy, and the United States, as the largest feed grain exporter, suffers the most from its own shortsighted decisions.

A U.S. residual supplier policy also tends to cut the U.S. share of total trade and to surrender markets to competitors. The effects on U.S. wheat exports are particularly harsh, as wheat can be grown in and exported from a number of countries. As a result, total U.S. wheat exports and U.S. market share will remain well below their peak if current residual supplier policies are continued for the balance of the decade.

But the United States need not stay with its current residual supplier policies. The 1985 farm bill provides the opportunity to make U.S. policy truly market oriented. Such a policy shift would put market forces back to work for U.S. agriculture again—enlarging total demand, the volume of grain imported and the share of that trade captured by the United States. Through this multiplier, incremental gains in many individual markets add up to a big boost in U.S. exports.

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[1] Soybeans are not included because they do not fit the residual supplier model; there is no target price, set-aside program or reserve on soybeans, and the loan is tied to market prices. Cargill projects continued healthy growth in world soybean trade (from 41.2 mmt in 1980/81 to 56 mmt in 1990/91—meal equivalent) and in U.S. soybean exports (from 20.9 mmt in 1980/81 to 32.2 mmt in 1990/91—meal equivalent). The rate of growth is roughly double the rates likely to result from the current residual supplier policies for wheat and feed grains.

To test this potential, Cargill ran an econometric study of the world grain market under two different policy options. One was a continuation of current policies for the balance of the 1980's. The other was a shift in 1985 to a market-oriented policy. That policy included four components—price-support loans linked realistically to market prices; an end to acreage reduction and set-aside programs; elimination of target prices; and a cap on the size of farmer-owned reserves.

Using data from 1967-68 through 1983-84, the study estimates the effects farm policy has had on net exports of wheat and feed grains from the United States and from others. Using these estimated effects, the study then projects net exports from 1985-86 to 1990-91 under two different farm policies—continuation of current policies and a move to a market-based policy. A unique feature of the study is that the policies of foreign governments are not taken as a given. Instead, the study found that the policies of foreign governments depend importantly on world prices and, in turn, U.S. policy. It applies these findings to a projection of future market growth under alternative U.S. farm policy scenarios.

The conclusions are striking. Projected gains in wheat and feed grain exports from 1985-86 to 1990-91 by replacing current policies with a market-based policy are large. Average yearly U.S. wheat export gains over this period are 5 to 10 million metric tons. Average annual U.S. feed grain export gains are 15 to 20 million tons. In other words, a shift to a market-based U.S. farm policy is likely to result in annual U.S. grain exports 20 to 30 million tons higher in the last half of the 1980's than under a continuation of current policies.

In addition, the export gains are projected to grow over time. This is because the responses of foreign governments—customers and competitors alike—become more pronounced over time. So, the average annual gains summarized above conceal a pickup in momentum over the 5-year period of the projections.

To conclude, many factors—weather, economic vitality, the pace of global economic integration, credit conditions, the dollar's value, and politics, among others—will shape what actually happens to future world grain use, world grain trade and U.S. export prospects. But the orientation of U.S. policy is a key factor shaping the opportunities that will be available and the extent to which American agriculture can capitalize on them. It also is one factor that U.S. agriculture, by and large, can control.

The combined effects of U.S. farm policy decisions on total world grain use, the share of use met by imports and the share of imports garnered by the United States are powerful. Because of the multipliers at work throughout the world grain economy, a shift from a residual supplier to a market-oriented U.S. policy can turn lackluster U.S. export prospects back into a dynamic market.

Such a gain is not impossible to achieve, and it would be worth pursuing. It could add, on average, 10 million acres to crop uses and increase agricultural exports about 25 percent without overtaxing either America's production base or its marketing and transportation capabilities. The increased demand also would boost farm income without disrupting markets or inflating food prices.

A MARKET-ORIENTED FARM POLICY

A policy to restore dynamism to U.S. agricultural exports would include: Commodity programs linked to market signals; declining reliance on Government-financed income supports; and a supportive trade and export promotion policy. Let's look at each of these separately.

COMMODITY PROGRAMS

Loans.—Past farm bills have mandated minimum nonrecourse loan levels. This inflexibility has stimulated production, undercut U.S. export competitiveness, and driven the United States toward costly, self-defeating, supply management programs.

What is needed is a U.S. loan program that is flexible enough to ensure that the United States is always a competitive factor in world markets. This would stimulate new import demand. It also would discourage competitive expansion by raising the level of uncertainty about future price levels confronting foreign producers as they make prospective planting and investment decisions.

This could be accomplished by establishing nonrecourse loans at 70 percent of a moving average of recent market prices. Or, this could be achieved by putting loans on a recourse basis, which would transform the loan from a price-supporting tool to a vehicle for financing commodity stocks until they can be sold.

Reserves.—A U.S. buffer stock policy is needed to assure domestic and foreign customers that this country is a reliable supplier of reasonably priced commodities. This could be done by simplifying and limiting the current farmer-owned reserve.

The Secretary should do away with trigger prices and simply agree to pay a participating farmer a storage payment as long as the farmer is storing reserve grain. The farmer would be free to sell the grain at any time. The storage payment rate would be determined through farmer bids, with the Secretary accepting the lowest bids first. This would provide authority for the public to share in the cost of carrying reserve stocks while holding those costs down and retaining flexibility in their acquisition and release.

To avoid excessive stock accumulation, a ceiling should be placed on the number of bushels covered by such storage assistance payments at any given time. The ceiling could be an absolute quantity—for example, 2 billion bushels of wheat and feed grains—or it could be a percentage of total annual use—for example, 15 percent of annual wheat use, 10 percent of annual feed grain use.

Supply management.—U.S. supply management programs are expensive, often costing more to prevent production of a bushel or a bale than either could be sold for. In today's global food economy they also are self-defeating. U.S. farmers retire marginal lands and farm the rest more intensively. Worse, foreign customers respond by raising their own self-sufficiency targets, and other exporters expand their output to replace the production the United States has forgone. And they are counterproductive, using funds to prevent production that would be better spent to make production more efficient and demand stronger.

For all of these reasons, the Secretary's set-aside and acreage-reduction authorities should be eliminated. Customers and competitors alike should understand that the United States intends to be the world market's preferred supplier. Adjustments in cropland use should be shifted to higher cost producers—whether importers or other exporters.

There is, however, a need to move some fragile lands now in cropping back into less-intensive, more soil-conserving uses. This would best be accomplished through a paid diversion program under which the Government would buy the cropping rights on that land for an extended period—for example, 4 to 7 years. Farmers would be free to use the land for haying, grazing, or the like.

If this were done on a bid basis, the costs would be held down, and the least productive or most fragile lands would tend to be bid in. It also should enable some older farmers planning to retire to do so on terms attractive both to them and to society at large.

ADJUSTMENT ASSISTANCE

While these policies will stimulate demand and discourage foreign production, restoring supply/demand balance will take time. During that transition, public assistance to some producers may be necessary. Such adjustment assistance can be more generous if it is temporary and more effective if it is carefully focused.

The target price-deficiency payment system is ill-suited to this task and should be eliminated. Target prices have failed in their purpose of divorcing income support from prices. The budget exposure of target prices has led the U.S. Government to try to manage world prices up toward target-price levels. Competing exporters now understand this and expand their production in response. They capture the benefits of U.S. price-propping activities while U.S. farmers pay the supply-management costs.

Target prices also have failed to provide adequate income support to U.S. farmers because deficiency payments do not reflect the different needs of farmers. About two-thirds of all farmers are part-time farmers who earn virtually all their income from off-farm sources. Commodity programs are of little benefit to them.

At the other end of the scale are large commercial farmers, many of whom have incomes and assets well above the average for all Americans. Target-price payments to them are hard to justify.

In the middle are farmers who depend importantly upon farming for their income and typically have incomes below the average for all Americans. Target prices are not helpful to them because their income problems are rooted in the scale of their farming operations—too large to be handled part time and too small to provide adequate income.

Demonstrating the failure of the target-price system is easier than designing a replacement. More than any other area of farm policy, the question of Government's role in supporting—or even stabilizing—farm incomes needs fresh thinking and open discussion. Several factors are likely to guide this examination.

First, the taxpayer costs of farm programs have to come down. Agriculture itself has much to gain from reducing Federal budget deficits, since this should ease interest rates and the value of the dollar. It must be expected that farm program costs will be held down as agriculture's contribution to reducing budget deficits.

Second, a market-based farm policy reduces the current drain of farm programs on the budget in two ways. It avoids largely ineffective—but extremely costly—general program expenditures, like target-price payments, excessive storage costs, and leaky supply-management programs. It also promises to restore supply-demand balance over the next few years and to do so at a higher level of farm production and farm income.

Third, there is a general movement away from open-ended Federal entitlement programs of all sorts. Farm programs will experience the same pressures. This means either more stringent payment limitations on generally available programs or a movement toward linking program benefits to demonstrated need.

It is not yet clear how this changing policy environment will limit options for Federal support of farm incomes, but it is clear that limits will be a part of the decisionmaking process. The great advantage of a market-based farm policy is that it offers a viable alternative to declining Government support for agriculture. That alternative is a faster growth to a stronger demand.

The kind of taxpayer assistance likely to be available—targeted on farmers in greatest need, effectively limited in total dollars, and declining over time—fits a market-oriented farm policy better than it does either a continuation of current policies or a move to tighter Government controls. Once that realization sinks in, it will be possible to turn to the challenge of designing a meaningful program of adjustment assistance at a cost acceptable to taxpayers and in step with the needs of a changing—but growing—farm economy.

TRADE AND EXPORT PROMOTION POLICIES

Aid and credit programs continue to be important forms of assistance to U.S. agricultural exports. Their purpose should be to encourage additional demand and to help countries graduate from concessional to cash customers.

At the same time, credit extension may not always be the best policy. It is not a substitute for a competitive price policy. It is not helpful if it overloads a country's debt-carrying capacity. It is not in the United States best interests if the effect is simply to rearrange trade flows so that its competitors take the more creditworthy or cash customers rather than to create real additionality. So, aid and credit programs must be designed and managed prudently and with an eye on accelerating market development.

Aid and credit.—Since 1980 aid and credit programs have mushroomed, rising from 5 to 15 percent of total U.S. agricultural exports. This growth was not guided by any single rationale, nor is it clear that the right policy instruments were chosen. Finally, it is doubtful that current credit levels can be sustained.

Under these circumstances, it would be better to develop a ladder of credit programs that bases such assistance more carefully upon different kinds of credit needs. For the poorest countries, Public Law 480 continues to play an important role in meeting food needs and developing future markets. It also has become more important in exports of some value-added commodities like wheat flour and soybean oil. These forms of assistance should be continued, focused more clearly on accelerating development and, if possible, made more attractive by reducing the burdens of cargo preference on the program, shippers, and recipient countries.

For developing countries on the middle rungs of the ladder, graduation to an intermediate-term credit program—7 to 10 year repayment terms—is logical. Targeting the use of the proceeds from the commodity sale in the recipient country on market-expanding investments is worthwhile.

The GSM 102 program—6-month to 3-year payment—should be continued for some countries. If the CCC quarantee were marketable by the lender, lending costs could be lowered without any cost to the Government. This would make the program more attractive to borrowers.

At the top end of the spectrum are countries who can repay loans in a 6-month period but who seek assurance of access to credit for a longer period. A credit line good for several years—that could be drawn upon when they need it and with repayment within 6 months replenishing the credit line-better fits their needs. This would provide assured access to credit, desirable for the recipient country's planning. But the credit would be essentially on commercial terms, enabling the country to recycle the funds into multiple purchases.

Finally, market development through cooperator programs has proven effective in transferring technologies that speed up agricultural development in participating countries and translating those gains into expanded U.S. exports. This is an area where public investments will continue to pay large dividends.

Trade policies.—Market-oriented commodity policies will be trade expanding. There remains the problem of reducing levels of protection—both import barriers and export subsidies—that impair and distort market forces. A combination of policies is needed to deal with these problems, and the mix may be different for primary commodities than for nonprimary or value-added products.

For example, the European Community has captured a significant share of world grain exports with aggressive use of export subsidies. The subsidies provisions of GATT are not an effective restraint on this practice, and the community is unlikely to change its farm support policies simply because of external pressures from the United States. Such change will come only when the EC concludes that reform serves its own interests.

However, lowering U.S. loan levels, linking them to market prices and ending supply management programs will both raise the costs of the common agricultural policy and greatly increase the uncertainty of budgeting for restitution payments. This will increase the internal budgetary pressures for reform within the EC.

Such reform might be hastened by offering to negotiate some middle ground solution on primary-product agricultural export subsidies that stops short of their elimination. For example, the United States might accept the Community's right to subsidize its current volume of grain exports in exchange for a commitment by the EC not to subsidize exports above that level. This would ensure that participation in export-market growth would be on a truly competitive basis. Eventually, the subsidized quantity itself could be negotiated down.

In other words, a U.S. farm policy that raises the costs of the CAP and a U.S. trade policy that offers the Community some room and time to adjust might together produce a solution that neither alone could achieve.

The U.S. dilemma in dealing with unfair competition in "value-added" products has been: One, it does not want to institutionalize export subsidies of its own; two, the EC is willing to bear the current costs of such subsidies; and three, the EC can effectively block progress toward enforcement of GATT rules prohibiting subsidies on nonprimary products. Once again, a judicious combination of farm and trade policies might help break this stalemate.

The U.S. Government could create a standby export subsidy mechanism on value-added exports. It would solicit exporter bids for parcels of business where the Community is the primary competitor, reserving the right to accept or reject any or all subsidy bids.

Such an approach should maximize the EC's uncertainty and the resulting budgetary costs of its subsidies at the smallest cost either to the U.S. Treasury or to the U.S. Government's desire to avoid the unwarranted subsidized competition. It also minimizes—but does not eliminate—injury to innocent third-party exporters. It should strengthen prospects for negotiating a solution to abusive subsidy practices.

CONCLUSION

At the heart of the trade-farm policy tie, however, is something that goes beyond tactical linkages and gets to the role America chooses to play as a trading nation. America's earlier commitment to liberal trade developed when trade was relatively unimportant to the general economy and to agriculture. That is no longer the case.

Today, about one-fourth of U.S. GNP is related to trade. In agriculture, the dependence is higher—perhaps 40 percent.

The United States is probably alone among the developed nations in its capacity to lead both agricultural and industrial trade into a more open, liberal, market-based regime. It is important that it exerts that leadership both through the examples of making its own industrial and farm policies more open and through the vision and tenacity of its efforts to negotiate similar trade commitments from others.

THE FERTILIZER INSTITUTE—POLICY STATEMENT

(By Gary D. Myers)

The Fertilizer Institute is a voluntary, nonprofit trade association whose members represent 95 percent of the domestic fertilizer production in the United States. The institute represents over 320 member companies including producers, manufacturers, traders, and retail dealers. Our members are a vital link in the American agricultural food chain.

The institute's committee on agricultural policy is made up of members from all across the United States and its members have both direct contact with farmers and direct experience in export trade.

American agricultural policy should recognize that export sales are a necessary part of the market for farm production. The farm bill should reflect this with a separate title on exports. However, there must be a realization that the rapid export growth of the 1970's is probably not possible in the foreseeable future. World population growth will continue below the 2-percent range, but overborrowing in the 1970's, the strong U.S. dollar and the general world economy, will limit the purchasing ability of many of our export customers in the 1980's. While it is our estimate that perhaps a 3- to 5-percent annual growth in sales can be expected, both the Export Commission now being considered by Congress and the USDA should carefully consider the questions surrounding the development of a marketing plan for U.S. agriculture: "What is our market potential and what does it take to make sales?" The answers to those questions should then be compared to the U.S. production capability and made known to the American farmer and the Congress. This consideration by the Commission and the USDA should be with caution and thoroughness and include a close study of both the physical and financial abilities of our world customers.

A full exploration of our export options and abilities may answer the question of market oriented versus production control oriented agriculture. For that reason, we are looking forward to the work and analysis of a National Commission on Export Policy.

Beyond the basic marketing strategy of better understanding the export market, there are efforts that can be undertaken to assist the American farmer's export ability.

There are two definite clear-cut issues: The strong U.S. dollar is a serious impediment to trade; cargo preference laws are a serious impediment to trade. Efforts to overcome these two challenges to export sales would greatly assist the U.S. farmers export ability.

The Fertilizer Institute recognizes that a strong merchant marine is necessary for this country, but forcing agricultural trade to finance that merchant marine through cargo preference is totally inconsistent with the needed effort to expand agricultural trade.

The strong dollar must be addressed by the Government. As a beginning, agriculture must assume that the strong dollar will remain for the next several years and interim steps must be taken to overcome that impediment until the specific strong dollar policies are changed and world currency equalization is accomplished.

A program of volume bonus or market enhancement is strongly recommended for enactment to buy down the impact of the strong dollar. This type of program could be used as a mechanism for rewarding increased annual purchases of U.S. agricultural products or loyalty to the United States in preference to other suppliers. Our country has a surplus of agricultural commodities and that surplus should be used to expand our export sales.

Delivery guarantees or contract sanctity should be assured for any export sale without question. More bilateral trade agreements should be negotiated. As long as our export competition enjoys bilateral agreements and the United States fails to obtain them, the American farmer will remain the residual supplier to the world.

Export credits should be continued but with caution to avoid overextension of debt. Export credits should be used only to meet export competition, not as an across-the-board marketing tool. Where likelihood of repayment on the part of a recipient country is doubtful, Public Law 480 should be substituted and expanded to include both sales and import infrastructure construction. Such assistance should be tied to long-term purchase agreements.

The credit difficulties of many of our trading customers underscores the necessity of those countries to earn their own foreign exchange through exports. A review of and assistance to the export of commodities or products not in competition with U.S. commodities would be appropriate and could greatly relive some countries' credit problems.

The development of the value-added market is laudable but there must be the realization that the process will be slow. Foreign taste, trade barriers, labor costs, and affordability limit the prospects for increased value-added product sales. The value-added market is a long-term effort with slow gain.

It should be a matter of general Government policy that food shall not be used as a foreign policy tool. AID, the Defense Department, the STR, the National Security Council, and the State Department leadership should be told to use other tools than American farm product sales when conducting foreign policy development and general trade development.

Many of our committee members believe that improved farm policy could more directly result from two specific things:

1. Balance the Federal budget.
2. Lower interest rates.

These economic challenges must be part of any farm bill discussion, and indeed, part of any Government policy discussion.

We acknowledge this fact with the full realization that this statement proposes Federal spending in the areas of export enhancement and food assistance. But it can be pointed out that spending money to expand the development of export markets for agricultural products need not increase the Federal deficit. Indeed, in the long term, there would be a favorable return for the farmer and for this Government. This accounting fact should be fully acknowledged by any new farm legislation.

The above points are specific ones that can be drawn from the general agricultural policy of the Fertilizer Institute.

APPENDIX

AGRICULTURAL POLICY

Adopted: November 4, 1983

Fertilizer agricultural policy

Res. 31-83. Whereas it is the policy of TFI that the Institute become heavily involved in the formulation of U.S. agricultural policy, with an emphasis on the crop commodities and

Whereas the importance of an adequate source of minimum cost food supplies to the citizens of the U.S., coupled with the continuing need to maintain trade balances with other nations, supports the need for the Federal government to continue a minimum regulatory role in U.S. agriculture, and

Whereas the optimum U.S. agricultural policy should be maximum production consistent with the lowest possible unit cost. Presently, that policy is constrained by both the lack of consistent demand and fluctuating production, leading to surpluses, and

Whereas these problems can best be solved by a long-term, consistent agricultural policy that works toward an objective of stability. That objective should include recognizing the total agricultural market, preserving that market, and expanding that market, both foreign and domestic. Agricultural research should be encouraged to achieve an increase in production efficiency. Farmland conservation programs should be expanded, and

Whereas the U.S. agricutural policy should be one of identifying our foreign and domestic market potentials, establishing adequate long-term bilateral trade agreements to assure quantification of those export markets. Consistent programs such as reserves and absolute contract sanctity laws should be maintained to assure the preservation of those export markets. Contract customers should be encouraged to develop reserves. Intermediate and long-term credit programs for export sales should be expanded, and

Whereas the market thus identified, U.S. agriculture should produce only to meet that identified domestic and foreign market demand, avoiding overproduction and surpluses through the use of acreage reduction programs. Such programs should be tied to strong conservation efforts. To further manage surplus and assure adequate supply, the farmer owned reserve should be continued. In turn, the reserve should be controlled by the establishment of an optimum level on the quantity of commodity in the reserve, quantities above that level immediately triggering a market enhancement program with those excess commodities. Loan rates, if continued, should be used only as a reserve control mechanism and adjusted as necessary, and

Whereas the market enhancement program would be one of supplying the excess quantities of the farmer owned reserve to the market to reward contract or traditional customers who will assure additionality of purchase, or to develop potential new markets, and

Whereas the market enhancement program should be complemented by a substantial expansion of the P.L. 480 program including larger volumes, greater number of eligible countries, and assistance with the importing countries' supply infrastructures such as ports, storage facilities, and transportation. All necessary funds for the program should be re-allocated from existing, less effective, international development organizations and agencies. The market enhancement program and P.L. 480 programs should be exempt from "cargo preference" requirements, and

Whereas the domestic farm policy should be marked by lower Federal budget exposure. Target prices, if continued, should be related to the variable cost of production calculated to encourage the use of the most efficient production techniques, and may be adjusted annually. Greater reliance should be placed on an improved crop insurance program rather than disaster assistance. There should also be an increased reliance on the Farm Credit System and the private sector, and a lessening in the role of the Farmers Home Administration loan program. All program announcements of the USDA should be made in a timely manner to allow the farm economy to plan for, rather than react to, farm program goals: Now, therefore, be it

Resolved the U.S. agriculture policy should recognize that the reliability of good and fiber supply is our best agricultural asset, both domestically and in world trade. The U.S. must protect its markets with consistency and expand those markets by meeting competition with a strong market enhancement program.

NORTH AMERICAN EXPORT GRAIN ASSOCIATION—POLICY STATEMENT

(By Joseph Halow)

I feel very strongly that the most important feature of new farm legislation would be major consideration of the disappearance of the grain rather than merely its production; that is, that new legislation be based on the consideration that it is the disappearance of the grain which is the only solution to the continued problems with U.S. agriculture. In the past Congress has continued to consider chiefly the personal needs of the farmers themselves and/or domestic production. The export markets must take more than half of all the U.S. wheat produced annually and at least one-fourth of all U.S. corn. This amounts to well over 1.2 billion bushels of wheat and 2 billion bushels of corn, so it is an extremely important portion of total production. A significant portion of the soybeans must also be exported or U.S. farmers will continue to be plagued with low domestic prices for their grains, the U.S. Government continues to be burdened with subsistence payments to farmers, and the Nation continues to swelter under the burden of surplus grains and rising costs of storing grain which no one wants, although many of them are in dire need of it. I do not feel, therefore, that it is enough to include one paragraph on exports in any consideration of U.S. agriculture; an agriculture program must be based on the export markets and the means to reach them. Any consideration of U.S. agriculture which does not recognize this fact is doomed to failure or must be constantly altered, as has been the case with U.S. agricultural policy for years.

I. Export prospects.—The U.S. export volume has continued to decline steadily for the past 3 years. Chances are strong that it will also decline this coming year, despite the appearance of some greater than normal need from the Soviet Union and possibly also the People's Republic of China. The dynamic growth years of the 1970's are behind the United States, and U.S. agriculture must now content itself with what appears to be a contracting of world demand for U.S. grain. The U.S. Government must blame itself in large part for the change, for it has operated under the myth that world grain consumption would continue to rise and that the world depended on U.S. grain production. This proved to be false reasoning when the United States imposed the 1980 embargo of grain on the Soviet Union, a factor which has cost the U.S. farmer millions of tons in exports and the Nation billions of dollars in export income. There is little said of this factor, one of the chief reasons for the current agricultural slump in the United States. Rather the Government continues to speak of making U.S. agriculture more market oriented, which means merely reducing the support prices to the farmers, in order to make U.S. production more competitive. While this in itself is a proper step, it is one which should be taken carefully, considering who is at fault in the current dilemma and who would be hurt. The farmer would have been content to have taken his income from the export markets, but he has had his access cut to those markets. The Government continues, furthermore, to rail at the Soviet Union, discouraging still further their purchases from the United States. My feeling is that the Government has, therefore, an obligation to the farmers.

There is also some strong pressure from among industry groups to expand the exports of value-added products. It is obvious that such exports would have greater value to the U.S. economy, but to pursue the exports of products which are less in demand than raw grain and which are infinitely more expensive than similar products obtained abroad or within the recipient country is a somewhat futile pursuit. If it is impossible to compete with the raw products, considering the higher production costs within the United States it is pressing an even more hopeless task to suggest that a foreign buyer, for instance, be pressured into buying the milled products. The only logical assumption on which the United States can base its export efforts is that it produces something that either cannot be produced by the receiving country, it produces that commodity better than does the receiving country, or it does so at a price which is lower and/or with a quality which is better than that produced in the receiving country. This has not proved to be the case, nor does anyone appear determined to prove that that is the case. The shades of difference in the quality must also be considered in relation to the differences in price. Countries would pay a slightly higher price for a better quality, but quality considerations tend to fade as the competing price is lowered; that means that the United States would have to lower its own prices substantially to export its value-added products, even though they might be of a better quality than those of its competitors. This would cost the United States substantially in the form of subsidies which would have to be paid to the farmers through the industry which markets the commodity.

II. Domestic policies.—Domestic farm policies and programs can be revised to take into account today's volatile and competitive export market, but this can be done only through calling for sacrifice from the U.S. farmer and/or some weaning of the farmer from Government support. It cannot and should not be done abruptly, for it would create an almost chaotic situation in the country, one which the country and the individual farmers could not afford. Any abrupt move would cause the bankruptcies of many more farmers and at a more rapid rate. As they sell their land it is then purchased by other, larger farmers, who continue to farm it at least as efficiently, only compounding the problems. What Congress must consider is the fact that decreasing the number of farmers does not necessarily mean reduced production. It must, rather, find a home for the excess production through commercial exports. This obviously means that much of the funds the Government should spend on agriculture should be spent on agricultural marketing, rather than on agricultural production. This would not only provide maximum benefit but would provide some form of solution to the U.S. agricultural problems, otherwise certain to escalate.

Some officials feel that the U.S. agricultural situation has returned to the situation as it was in the 1960's. This is only partially true, for although the marketing situation is now more as it was in the 1960's, farmers are living in the 1980's, with a completely revised set of economic circumstances and marketing problems, after having experienced the strong expansion in agricultural growth and marketing during the 1970's. They cannot return to the 1960's but must be helped to adjust to the 1980's, where the situation is also now sharply different for a series of reasons for which they were not responsible.

III. Competitiveness.—The United States must realize that its competitiveness in the world markets is actually another false assumption considering the pricing practices of other exporting countries. The United States is competitive when it deals against fair pricing practices, but the other countries consider U.S. prices when they quote their own, always quoting below current U.S. quotations, when necessary, to obtain business. The U.S. trading system has worked remarkably well, despite these odds, but if the United States is to expand its exports, it must first discourage the production in the other exporting countries. For what they produce they must, by force, sell, and they will underbid U.S. quotations. The other alternative is for the United States to remain fiercely competitive, in order to obtain whatever market increases there must be with the growth in population.

IV. Export credit.—It is correct that many countries are now overburdened with debt and frequently are unable to meet even the interest payments on their debts to exporting countries. It is a fact, however, that they cannot buy if they do not have the means to do so. This is one of the dilemmas the United States must consider if it is to expand its exports. Export credit is one of the most important market development tools, and the United States must decide whether or not it will spend its money in this fashion or merely in direct subsidies to U.S. domestic production, without considering the destination of that production. Credit programs should be continued but be continued carefully so as to obtain the greatest possible benefits for the U.S. farmers and the U.S. economy. The United States would, otherwise, run the risk of increasing the indebtedness of the importing countries far beyond their abilities to pay. The recipients of credit would have to be selected even more carefully. In no instance should the United States consider granting more credit to any recipient than that recipient would ultimately be able to pay. The United States would, otherwise, have to consider its extension of credit to a recipient as a form of grant.

It is difficult to ascertain what kind of new business is obtained through credit; that is, it would be difficult to prove it. In some instances the countries would not be able to buy if they did not have the credit, but it is obviously impossible to determine after a customer has made a purchase with credit whether or not he would have made it had he not had the credit. The one factor of which one could be assured, however, is that if he has credit from the United States he buys the commodity from the United States and not from a foreign competitor.

V. Strong dollar and other impediments to trade.—It is also my strong feeling that the United States continues to blame a strong dollar for its problems with agricultural exports, whereas it is not actually the dollar but the U.S. agricultural policies which have led to the dilemma. A study conducted by the U.S. International Trade Commission proved rather pointedly that the stronger dollar contributed less to the export malaise than was generally assumed, and that this was the case with even industrial goods. A recent article which appeared in the Wall Street Journal likewise disputed the theory that the stronger dollar has hurt agricultural exports. And even if it has, how could the United States overcome that problem? It cannot forcibly and irresponsibly attempt to create the situation in which the dollar would be weaker. All grain exports are priced in dollars, no matter from what country they are exported, and they are, furthermore, priced in relation to the U.S. dollar price quotations for the same products. This means that the importer pays the higher price, no matter whether the goods come from the United States or from its competitors. My feeling is, furthermore, that the U.S. dollar will continue to be strong, since the bases for its strength are unchanged and not likely to change in the immediate future. The United States should then cease speaking of a factor which it cannot change. It should consider more practical means to accomplish its goal. Speaking of extraneous issues merely deflects attention from the real issues, which tends to slow down or even stop correction.

The U.S. cargo preference requirements are among the most destructive policies limiting U.S. exports. No importing country will pay more for a delivered product than the price at which he can obtain the same product from a competitor, or a given differential for quality considerations. If the United States willfully makes its own product more expensive it has no chance whatsoever of obtaining the business, and not only are the shippers, who insist on cargo preference requirements, hurt, but so is the producer of the product. The shipper is then hurt further as the national economy is hurt. All such trade restrictions work to the detriment of the nation which imposes them. There is no one who has a monopoly on food; it is in surplus throughout the world, despite the fact that people are hungry where there is not sufficient money to purchase the products. It is absurd to assume that the developing countries would pay an additional quantity to the United States to help support the U.S. shipping industry—which has not showed the benefits of the cargo preference payments it has received on concessional sales—by continuing to pay the additional costs. There would be absolutely no cargo preference sales were it not for the fact that they are imposed only on concessional sales, where the recipient country is, in effect, at the mercy of the nation granting the concession. There is no chance whatsoever for cargo preference in straight commercial sales.

VI. Unfair trade practices.—The United States has continued to criticize the European Community's common agricultural policy as a factor which hurts U.S. exports. This is quite accurate, but the EC has had its common agricultural policy for approximately 20 years. It becomes difficult suddenly to indicate that what the United States has essentially overlooked for 20 years is suddenly unbearable. This is particularly true after the last administration gave the EC its blessing and even indicated its acceptance of this policy in the Kennedy round of negotiations. During that round the United States indicated that it would not interfere in policies currently practiced, but that the EC should not expand these. In exchange the United States agreed that it would not subsidize its exports. Such an overwhelming—and certainly unfair to the U.S. farmer—acceptance of the EC's agricultural policy is frequently thrown back at the United States by the EC whenever there are confrontations on trade. The United States has, furthermore, continued to criticize the EC's policy when it is, in fact, pursuing a somewhat similar policy here in the United States. The system of loan and target prices in the United States is really no different from the complicated system practiced by the Europeans. Both the United States and the EC are now under pressure because of the costs of the programs, but the United States cannot continue to blame the EC unless it changes its own policies. If negotiations fail, the only effective action against the EC would be countermeasures, for the EC is already facing serious financial burdens in the pursuit of its policy. If the U.S. policy were less like the EC's the United States could with clean hands then rail against the EC. The United States should, furthermore, under no circumstances, tolerate any expansion of the EC's policy, but should, in fact, work to have it dismantled. This also cannot be done overnight, but it would appear to be time that the United States begin.

VII. Export control.—These export embargoes practiced by the United States have been the most serious impediments placed on the back of the U.S. farmer by the U.S. Government. They have never been successful, even past historic instances of sales embargoes have repeatedly been proved futile. The United States should resolve never again to practice a sales embargo. The only factor on which the United States could base such action would be the myth that the world must, by force, depend on U.S. grain production. This has been proved to be incorrect so often that the United States should disabuse itself of this foolish misconception. It is the factor which has encouraged the production in the foreign countries, a production which continues to compete with the United States in various other markets. It is, furthermore, a factor with much longer lasting significance than could have been imagined by the perpetrators. One could conceive of circumstances under which a nation could say to another nation from whom it was a significant taker of goods, that it would refuse to buy any more of that nation's products unless it behaved in one or another fashion. But to indicate to a nation that "if you don't do what we tell you we won't sell to you—when that nation has other sources of supply readily available—and anxious to do business with it—must appear to be as foolish as it, in fact, is. It alienates not only the nation against which the embargo is imposed, but it also puts those other importing countries on notice that they cannot depend on the United States as a constant and commercial source. There is hardly a nation which has at one time or another not agreed with U.S. policy, and all these nations must be concerned about a nation which can practice such an irresponsible sales program. The United States can prove it is a reliable supplier only by being one.

Having failed so often in this effort, the United States must expend even stronger efforts in the future to convince importing nations, and this will take a great deal of time and even greater effort. No amount of merely saying so will be sufficient.

VIII. GATT negotiations.—There should certainly be another round of GATT negotiations, but any new round should lean very heavily on the business sector for advice and guidance. All too often the negotiations are conducted by Government officials who have little or no knowledge and even less understanding of what is required to do business. The negotiations—not the result—becomes of prime importance to these officials, who deal with seasoned professional negotiators from other nations. The United States rarely obtains any benefits but, as in the last round, winds up paying the other nations for their acceptance of whatever else the United States has given away; that is, paying twice without obtaining any obvious benefit for U.S. farmers.

The U.S. negotiations also become overburdened with committees which tend to be appointed to advise the negotiators. In all fairness to the committees, they can hardly be expected to produce the proper type of advice for the negotiators, if they are composed of representatives of every segment of the U.S. population. A consumer advocate, may, for example, be avidly interested in U.S. export policy, but he may not understand the need to export. He may see only the immediate effect—that exports tend to make the price of a certain U.S. commodity firmer. He does not necessarily see the overall effect on the U.S. economy, through which he himself benefits, as does the Nation.

IX. Export legislation.—The United States is facing a seriously deteriorating agricultural situation and could meet this with legislation. It should legislate sanctity of contracts provision—which it has already wisely done—and should keep such legislation intact. It should, furthermore, limit Government's use of such embargoes even further, divorcing exports from political considerations. It should return to industry its stronger role in conducting foreign business, for industry has also proved that it is best suited for this very important function. Government officials cannot negotiate business for they lack the incentive to do so. Government should also practice a consistent policy with regard to exports. It should not, on the one hand, permit Government to increase its cost of doing business—as recently practiced by the Federal Grain Inspection Service—and at the same time lower its support prices to the farmer. This is essentially a dual form of taxation of the farmer, for its reduces his source of Government income and increases his Government expense. No private business could possibly exist if it attempted to impose price increases on an already depressed industry, basing these increases on its Government mandate not to operate at a loss. It can only do this when it is a monopoly, and that is the basis on which the FGIS has imposed its increases. It can never calculate the harm it has done the industry and how it has, thereby, further reduced its own income through limiting U.S. export sales. For there are two ways to meet deficits: One is to increase its income, but if this is impossible the other is to decrease its costs. It would appear the FGIS has ignored this latter possibility.

Government must study the export problems and discuss them freely with industry officials, those who are actively involved in exporting. Only in this fashion can Government obtain from them some means of helping the industry expand its sales abroad. There are differences of opinion among the exporters, but Government should be prepared to discuss these differences honestly and carry them out. It could be that the Government may determine that some form of subsidy might be desirable to expand exports, but it can determine this only through a dialog with exporters.

X. Food aid assistance and markets in developing countries.—There is a great deal of dialog about expanding exports to developing countries, but the only means through which the United States could hope to develop quick and expanded business would be to subsidize exports to these countries and/or donate food to them. There is just not enough capital within these countries to make them large customers of American food products, which they actually desperately need. There is, furthermore, nothing in sight which could change their economic status quickly so as to make them better customers of U.S. food products. The United States must, therefore, continue to provide aid to these countries in a manner which would not disturb their own economies; that is, not make them dependent on the aid nor destroy their incentives to improve either their agriculture and/or their other industries so that they can provide their people with the foods which they need and which they want. This would, furthermore, help build future and stronger markets for the United States, while helping it dispose of surplus production.

Intermediate credit.—It would be wise for the United States to offer an intermediate credit program to buyers who are not able to meet the shorter terms of current credit facilities but do not need the longer terms of the Public Law 480 program. Any program which the United States may offer which provides a further incentive would be useful.

Close partnership between Government and business.—This could probably be useful in certain areas, but it would be somewhat difficult to institute and implement in grain exporting. Grain companies work on their own in a highly competitive field. It would be difficult to find a role for Government within this field wherein it could work with individual firms. It would have to work with all of them together to be fair. A trading company created for such an endeavor might not be a good means of doing this. Government should, nevertheless, act in a helpful role rather than always as a control agency. Additional Government control of exports or exporters would merely complicate further a problem already fraught with difficulties.

Bilateral agreements.—Every study of this proposal has proved that it would not be in the best interests of the United States to set up a structured system of bilateral agreements. This would merely regiment agricultural exports and set an example for other countries. This has already happened to some extent, and any expansion should be discouraged. The United States could run into problems with such a system if it were to encounter a bad year in agriculture, attempting to determine who would have his portion cut or who might have to do without. The business would be better transacted if there were some element of chance in it, which would encourage competition.

Much of this is obviously expensive, and the income will have to come from the Government. This presupposes that Government would have to spend substantial sums of money on agriculture, for Government cannot afford to let such an important segment of the economy founder. Farmers will obviously not be able to continue without income or with their income reduced to particularly low levels. One cannot derive income from a marketplace into which income is not flowing. Government should, however, spend its investment in agriculture in such a fashion that it would serve agricultural interests for the longest period of time and provide more than some part-time relief for the farmers.

THE IMPACT OF PRESENT TRADE POLICIES AND PRACTICES ON THE U.S. TOBACCO FARMER

(By Bruce L. Flye, Tobacco Associates, Inc.)

We appreciate the opportunity to comment on international trade and agricultural exports. With tobacco providing over $2 billion annually toward a favorable balance of trade, we feel tobacco must share and contribute to our Nation's policy concerning exports of agricultural products.

Tobacco Associates, Inc. was formed in 1947 and is governed and financed by the Flue-cured tobacco farmers in the Southeastern five Flue-cured producing States for the purpose of promoting, developing and expanding world markets for U.S. produced tobacco.

The Flue-cured tobacco farmers today rely heavily on foreign customers—6 of every 10 acres of tobacco they produce is dependent upon the foreign market. This percentage will unquestionably have to grow in the future. The export market will continue to be the difference between profit and loss for the U.S. tobacco farmer. Therefore, every market potential must be explored and every trade barrier must be challenged and neutralized.

The opportunities for increasing exports are found primarily in the developing countries of Asia, the Middle East, and Africa. Many of these nations are experiencing economic growth and a subsequent growing demand for a full-bodied, flavorable blended cigarette. The combined aspect of economic growth and growing demand of a quality cigarette provides the ingredients for a new U.S. tobacco market that was previously filled by oriental or dark type cigarettes. In developing nations, consumers prefer a full-bodied, quality cigarette. This fact gives the U.S. tobacco farmers a distinct advantage for no other country can produce tobacco with the flavorable characteristics processed by American tobacco. There are however, existing foreign trade practices and government policies that will continue to make sales to this region difficult. We will attempt to identify some of these existing circumstances below.

U.S. tobacco has always been recognized for its superior flavor, taste and aroma. Our growers, through their hard work, dedication and continuous research, have been able to maintain this quality advantage. For this reason, U.S. tobacco has been able to demand and receive a premium price for its superior quality characteristics. Foreign production and competition has increased tremendously in recent years. Other countries have been able to produce filler type tobacco (lower quality) at a lower price because of cheap labor and/or government and company subsidized inputs. Some competing countries implement hidden export subsidies and nontariff barriers restricting normal demand for tobacco. Both of these situations can be expected to arise when economic problems are prevalent. In a word, it's protectionism.

The United States and the tobacco farmers have always supported open, free, and fair trade. However, the U.S. tobacco farmers can not survive if they are in the only country adhering to a free trade policy. Tobacco from Malawi, Tanzania, Zambia, and Zimbabwe enter the EEC duty-free. (A volume equal to 70 percent of our 1982 Flue-cured exports.) Export subsidies for tobacco are used in Argentina, EEC, Korea, and Canada. The U.S. Congress, USDA and U.S. Trade Representatives must continue to work with the tobacco community to eliminate these trade barriers and unfair trade practices.

Maintenance of a sound and viable tobacco program is vital to the tobacco farmers. Not only from the economic stabilizing effect, but also to provide a dependable supply of quality tobacco to our foreign customers. The tobacco program is the single most important factor in providing a dependable supply to our over-seas customers. In addition, and as a part of the tobacco program, the successful operation of the grower-owned Stabilization Cooperatives have made available a year-round supply of tobacco to the world industry for accommodating unforeseen developments in demand. Continuation of a successful stabilization operation is an integral and vital part of the U.S. farmers' ability to be counted on as the world's most dependable supplier of tobacco.

The strength of the U.S. dollar has also dealt a severe blow not only for export potential, but has made imports more attractive. Our single most important market, the European Community has had record shattering days of new highs against several European currencies. A Brookings Institute scholar has estimated an 82-percent appreciation of the dollar against currencies in the European Monetary System in the 4 year period ending in mid 1984. During the past 3 marketing years, the tobacco growers have operated without any increase in their price support. More significantly, exports of Flue-cured tobacco during 1981 were above the 10 year average of 1973-83 but have decreased each year since then and imports have continued to increase each year since 1981. Not only does the dollar's strength hurt our imports, but the extraordinary high U.S. interest rates that our growers must pay adds tremendously to their input cost.

There are significant trade obstacles confronting our U.S. growers. Over 50 percent of the world's population is removed as a market because of political reasons; for example, Russia, Eastern Bloc countries, Syria, Lebanon, Libya, Iran, and Vietnam. The lack of hard currency prevents imports of many of the developing countries in the Middle East and Far East. Some of the African nations do not have the infrastructure nor economic base to use quality American leaf. And government trade policies of the Latin American nations preclude importation of tobacco.

In summary, our producers find themselves in a serious and almost desperate situation. Since 1982, the U.S. tobacco farmers have been shouldering the financial burden of their own program—the only farmers in the Nation required to do so. The tobacco stocks (600 million pounds) in which they are financially responsible is valued at $1 billion. Cigarette sales and leaf consumption are at best static, and are trending downward in most traditional developed markets. Over one half of the world's population is closed to us as a market because of political reasons. The lack of hard currency, unfair trade policies, or an inadequate economic base prevent the purchase of U.S. leaf by some of the massive populated areas of the world.

Additionally, the stiff export competition throughout the world is intensified by duty preferences granted to many competing exporters and the use of export subsidies. This competition, sometimes assisted and financed by U.S. cigarette companies and leaf dealers, is producing tobaccos with labor that may cost only $60 per person per month. Consequently, they are able to price their tobaccos significantly below U.S. tobacco. All of this, combined with the strength of the dollar has dealt our growers a severe blow.

In our opinion the global, political, economic and monetary problems outlined above will prevent any immediate increase in world demand for U.S. leaf. U.S. Government export incentives and credit programs are tools that must be further implemented to modify the serious depressed world market. We appeal for tobacco's equitable share and use of these existing programs and urge the creation of new and innovative programs. We also appeal to the U.S. Congress, the administration and other governmental agencies to investigate and eliminate these foreign trade barriers and restrictive trade practices. Additionally, we urge the continuation of a sound tobacco program that continues to provide security to our farmers and dependability of supply to our world customers.

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U.S. MEAT EXPORT FEDERATION—POLICY STATEMENT

(By Allan R. Middaugh)

Founded in 1976 by the American Meat Institute, National Meat Association, National Cattlemen's Association and the National Pork Producers Council, our mission was and continues to be the expansion of exports of edible meat products derived from beef, pork, and lamb. The federation represents some 80 exporting interests including national associations, State beef councils, pork producers, meat packers/exporters, grain promotional groups, and agribusiness interests. We function as a cooperator with the USDA's Foreign Agricultural Service from whom we earn Federal market development funds along with some 60 other commodity groups. The federation is the sole recognized foreign market development arm of the U.S. meat industry.

Export prospects

If the past 8 years are any indication, red meat exports will continue to grow in the years ahead as our market intelligence level increases and our supplying companies become more astute marketers overseas. An indication of this growth might be the success the United States has had in Japan—a market we recognize as being particularly difficult to penetrate. In 1976, our share of the Japanese beef import market was under 10 percent. First half of 1984 statistics indicate that our market share has grown to 30 percent of Japanese beef imports, and we are competing with less cost supplying countries such as Australia, New Zealand, and more recently the European Community. It is expected that the balance of the 1980's will appear to be less dramatic in growth than that witnessed in the late 1970's. World economies, the strength of the dollar and the politics involved in world meat trade will serve to dampen such a growth as was enjoyed in the late 1970's.

The prospects for increased exports of high value/value-added U.S. products are good for future years. The obvious benefits to the U.S. economy are also the reasons behind protectionistic attitudes becoming increasingly evident in Japan and Western Europe. The comparative advantage concept as it relates to meat production and international trade is nowhere more evident than in grain-fed versus grass-fed livestock and meat products. America can produce grain-fed beef, pork, and lamb cheaper than any country in the world, just as Australia and New Zealand can take cattle and sheep off of grass at a cheaper cost than any North American country. Since, in this segment of our agriculture the comparative advantage is quite evident, what must be addressed is the mentality, both at home and abroad regarding the politics surrounding international meat trade.

Domestic policies

Recognizing that a very large portion of U.S. bulk commodity production now enters the world marketplace, it is absolutely necessary that domestic policies be designed to reflect this country's desire and need to also be a substantial supplier of high value/value-added products such as red meats. One commodity does not have to be at the expense of another—there is room in the world marketplace for both U.S. feed grains and high quality beef and pork. A balance between these commodities is what is necessary, and history has proven that domestic livestock production does not suffer but becomes more efficient when international market prices become a part of the overall trade equation. Government funds for agriculture will and should have limits in the future. The livestock and meat sector of this country, as represented by the MEF, judges that a realistic level of funds be devoted to export promotion, intelligence, and servicing in order to pave the way for U.S. meat packers/exporters in their quest for expanded overseas markets. Our packers have demonstrated an ability to move into a market given some degree of assurance that governments, either ours or theirs, will not interfere in the implementation of a sound trading relationship.

Competitiveness

As indicated earlier, American agriculture has an easily identifiable comparative advantage in red meat production. What negates this competitiveness is the application of duties, variable levies and surcharges which are applied to U.S. products by foreign governments. Japan applies a 25 percent duty on U.S. beef and up to 10 percent variable levy on pork. The European Community adds a duty of 20 percent on American beef while the United States charges a 2-percent duty per pound against EC meat imported into this country. It is quite evident that America's competitiveness in these products overseas is immediately destroyed by the application of duties, levies, and surcharges called for by foreign governments.

Strong dollar

Over the past 24 months, one of the major impediments to expanded trade in meat products has been the continued strength of the dollar abroad. Our beef, pork, lamb, and variety meats (that is livers, kidneys, and tongues) prices have remained relatively static during this period but have multiplied in price due to the dollar in some of our most important markets—Denmark, France, the United Kingdom, and Mexico. An example would be our beef trade with Denmark where in 1976 the Danish krone/U.S. dollar exchange was 6:1. Current exchange levels call for a 10.3:1 exchange, thus limiting our trade to all but a very few end-users to whom product cost is not a major issue. All of this is happening at no benefit to American livestock producers, and certainly no benefit to overseas consumers.

Unfair trade practices

To the best of my knowledge, no other U.S. agricultural commodity abounds with unfair trade practices to the extent of those inherent in the international meat trade. The EC, up until 1978, one of the world's largest meat importers, very soon will overtake Australia as the world's largest beef exporter. This phenomenon is due strictly to production and export subsidies granted to EC beef producers and exporters. The impact on world trade has been devastating, whether it be in the Middle East or the Pacific Rim. There must be an immediate call for cessation of export subsidies as implemented by the EC Common Agricultural Policy or world meat trade will continue to be further distorted with only a few relatively open markets (including the United States) bearing the burden of accepting surplusses for Oceania, Latin America, and the European Community.

Export controls

U.S. livestock and meat suppliers to the world marketplace have spent many years attempting to live down the reputation of being an unreliable supplier—our reputation coming from administration embargoes on hides in 1966, soybeans in 1973 and grains in 1980. Contract sanctity legislation enacted by Congress is certainly a step in the right direction, however, further administration guarantees must be made evident in order to assure the world that the United States will be a reliable supplier.

GATT negotiations

With regard to future GATT negotiations and their effectiveness, the conducting of another round of multilateral negotiations should come only after the effectiveness of the GATT is reviewed and the proper adjustments made. The GATT has proved to be relatively ineffective, at least in the livestock and meat sector, due to timelags needed for hearings, decision making and implimentation of corrective measures. Had the recent trade negotiations on beef between the United States and Japan been taken to Geneva, it was presumed that an eventual ruling would take several years before publication, an unacceptable timelag during which frustrations and country-to-country divisions multiply while trade stagnates. The intentions of the GATT are proper while the mechanism needs extensive streamlining.

Export legislation

It is recommended that again in the 1985 farm bill, special attention be devoted to exports. The hand of the U.S. Government should be strengthened in bilateral and multilateral trade negotiations. Export subsidies should not be a part of our farm bill and should be energetically challenged throughout the world, and it is absolutely essential that there be a closer partnership between government and business in foreign marketing. We often times hear that the greatest impediment to our ability to enter the foreign marketplace is the U.S. Government. This suggests that there is an extremely wide gap between U.S. product inspection procedures and documentation requirements which discourage if not prohibit continuing interest on the part of U.S. suppliers becoming involved overseas. During the past several years, there has been evidence of a desire on the part of the USDA to respond to the private trade's concerns on inspection, documentation and product labeling, but our success is contingent upon the kind of government/business rapport enjoyed by our competition in the world marketplace.

A DESCRIPTION OF POLICY ALTERNATIVES

The clear message from contributions to this print comes not from what is said, but from what is not stated: no author advocates abandoning our overseas markets or contends that farm policy can be established without regard for the national and international economy. Contributors to this print are unanimous in their opinion that expanding agricultural exports is essential for the prosperity of U.S. agriculture. The agreement on this aspect of agricultural policy stands in contrast to the wide variation of policy options being advocated for domestic farm programs.

This, in addition to the fact that almost all of the contributors link domestic farm policy to export performance and link domestic and international farm policy to far-reaching macroeconomic factors, dispels any notion that agricultural policy can be made without regard to its effect on exports.

There seems to be a consensus that for the United States to be successful in export markets, American farm policy must be more able to respond to changes in the international economic environment. This flexibility, aimed at increasing, or at least maintaining our export markets, may be designed in many different fashions. The following summarizes major options offered by the authors of articles in this print:

LOAN RATES AND TARGET PRICES

The options suggested range from eliminating loan rates and target prices to keeping statutory levels, but allowing flexible loan redemption with any difference between original loan rates and redemption prices being made up by the Treasury to the producer. The objective of these options is to allow loan rates to go up or down depending on what market signals indicate. Another option given considerable attention is to set loan rates as a specified percentage of a 5-year moving average of market prices and to link target rates to a specific percentage of the resulting loan rate.

SUPPLY CONTROL

Most authors seem to believe that supply management should be continued as a policy option to help keep supply and demand in relative balance, but a number question the effectiveness of programs designed to cut production. Some object to policies which continue to give the Secretary of Agriculture such authority. Options suggested include limiting the use of supply control programs or, if used, to reduce budget exposure by limiting and/or targeting diversion payments.

GRAIN RESERVES

Most agree that a reserve program should be part of the policy mix, but disagree on the appropriate size of reserves. One option would be to statutorily limit the size of reserves. Others stressed a need to provide for various ways to increase reserve flexibility, such as by eliminating all of the various mechanisms to take grain out of the reserve and simply pay storage on a month-to-month basis with producer option on when to terminate participation.

EXPORT ENHANCEMENT

Export credit is generally accepted as being neccessary in a competitive environment where other exporters offer credit and outright subsidies to customers. Current export credit programs fall into either short-term or long-term concessionary sales. Current export credit programs consist of either long-term (40 years) concessional sales through Public Law 480 or short-term (3 years) commercial sales through export credit guarantees. There is widespread support on intermediate export credit programs (3–10 years) that would operate between the Public Law 480 programs and current short-term export credit guarantee programs.

There is sharp division, however, on the desirability of subsidized credit or other forms of export subsidy. Some see export subsidies as the only answer to competitiveness while others contend that export subsidies are a net loss for the exporting country as well as its competitors and a net gain only to the importing country's consumers. A middle ground does exist in that most agree that special targeted subsidies are justified in order to protect or regain a market threatened or lost because of export subsidies of competitors. Few argue with the need to maintain and/or increase market development/food aid such as Public Law 480 Food for Peace.

TRADE BARRIERS

Although trade barriers take many forms and are used by all countries, there is wide agreement that they should be reduced and eventually eliminated. The General Agreement on Tarriffs and Trade [GATT] is recognized as the logical tool for resolving trade barrier problems. Some contributors believe a new round of trade negotiations should be held as soon as possible, while others prefer more time to define positions and issues.

Nontariff trade barriers pose greater difficulty because they are primarily the result of domestic policies, government bureaucracies, and technological differences between countries. A global standardization of legitimate nontariff trade barriers is recommended.

MARKET DEVELOPMENT

There is considerable support for additional resource application in the market development area. These efforts range from increased use of Public Law 480 to more scientific research of foreign market potential.

HIGH VALUE PRODUCTS

Authors disagree on the merits of promoting high value products. Opponents contend that these efforts would be wasted because we are encountering difficulty in moving lower priced raw products. Proponents argue that high value exports would increase economic activity and employment.

A related issue is quality of product. At least one author suggests that American producers could increase product marketability in a competitive environment by paying more attention to quality control and customer specifications.

TRADE AND FOREIGN POLICY

Embargoes and other overt actions that restrict trade are unanimously opposed. Authors emphasize the need for legislative restrictions on the use of embargoes and producer protection in the event of their use.

On a more subtle level, there is recognition that economic progress in the lesser developed countries would benefit trade. In this regard, policy options include increased use of Public Law 480 title III, use of GSM-301 intermediate development credit program, and general support for programs aimed at economic growth in the LDC's. A novel idea of providing special drawing rights [SDR] for wheat credits from the International Monetary Fund [IMF] is also presented by one author.

MACROECONOMIC INFLUENCES

There is agreement that macroeconomic factors such as inflation, interest rates, exchange rates, fiscal policy, and monetary policy have an influence on agricultural trade.

Recommendations on how to make these factors more favorable for exports are sparse. Indeed, one author advised not wasting time on factors beyond agriculture's control. However, there is wide support for a balanced Federal budget and other monetary and fiscal policies which create economic conditions which foster long-term, noninflating growth in the United States and worldwide economy.

APPENDIX

ALTERNATIVE POLICY TOOLS FOR INTERNATIONAL AGRICULTURAL TRADE

(By Ronald D. Knutson and James W. Richardson)[*]

International trade policy encompasses those Government programs that directly affect the quantity and/or price of commodities, products, or services exported or imported. Our concern in this article is with those programs that affect either exports or imports of agricultural products.

The mushrooming of agricultural exports in the 1970's thrust U.S. farmers into an international market for farm commodities. In earlier decades U.S. farmers were largely insulated from international market forces. Price support for farm commodities were generally above world market prices. Exports were limited largely to those instances where the U.S. Government was willing to provide a subsidy—either overtly or as part of a foreign food assistance program such as Public Law 480. The need for overt subsidies vanished for a period in the 1970's as policy concerns shifted from surpluses to deficits. In the process, the U.S. farm policy changed to one of stabilizing markets. Export markets exploded throughout the decade—seemingly without expanded Government support.

In the early 1980's, export market growth vanished as fast as it had appeared a decade earlier. Farmers and/or governments throughout the world had responded to favorable prices in the 1970's by increasing production. The dependability of the United States as a source of supply suffered from a series of export embargoes. These conditions fostered substantially increased interest in trade policy.

What tools are available to expand exports of farm commodities—or for that matter to curb imports? What follows is a brief summary of the major agricultural trade policy tools. Each individual tool is defined, its objective is explicitly stated, the history of its use is reviewed, and the resulting experience with its use is briefly summarized. Finally, the major consequences of each major policy tool are itemized.

A brief summary is not and cannot be all-encompassing. Some tools have probably been omitted. In certain instances this was a conscious omission. For example, it is often pointed out that one of the major factors adversely affecting exports in the value of the dollar. While we recognize this fact, the tools selected have been limited to those that have a specific agricultural focus—as opposed to the general economic focus of the factors that influence the value of the dollar.

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In addition, these tools are part of a broader treatment of agricultural policy tools encompassing domestic farm policy and marketing policy as well as international trade policy. Many, if not most, of these tools also affect exports and/or imports. A copy of this broader publication can be obtained by writing the authors at the Agricultural and Food Policy Center, Department of Agricultural Economics, Texas A&M University, College Station, TX 77843.

Policy tool: GATT [General Agreement on Tariffs and Trade].

Policy area: International trade, trade barrier reduction.

What it is: GATT is a multilateral United Nations treaty among more than 80 governments, including the United States. GATT contains a code of principles and provides a forum for consultation and dispute settlement. Five principles govern GATT:

(1) Trade must be nondiscriminatory.

(2) Domestic industries should be protected mainly by tariffs as opposed to nontariff barriers (quotas).

(3) Tariffs agreed upon are binding, with provision for compensation if violated.

(4) Consultations are provided to settle disputes.

(5) GATT procedures may be waived on agreement of the members with provision for compensation. Barriers in existence when GATT was established are legal until negotiated away.

Objective: To liberalize and expand trade among nations through negotiated reductions in trade barriers. These actions are designed to prevent the development of rounds of retaliatory trade barriers.

When used: GATT came into existence after World War II. Trade barrier reductions have been accomplished in three rounds of negotiation—the Dillon round (1960–61), which provided assured European Economic Community [EEC] duty-free entrance for soybeans and cotton; the Kennedy round (1963–67), which resulted in tariff reductions on a wide range of farm products; and the Tokyo round (1973–79), which reduced nontariff barriers on a limited number of commodities.

Experience: While experiencing substantial initial success, the most difficult problems that remain in securing trade barrier reductions are those rooted in the domestic farm policies of the participating countries. Classic examples include the EEC common agricultural policy [CAP] and U.S. price supports for dairy products.

Consequences: GATT increased overall trade among nations, thus expanding opportunities for exports.

GATT provides a forum for settling disputes.

GATT establishes a code of fair trade.

GATT restricts the latitude of the participating countries in subsidizing exports and engaging in other practices. Thus in the short run GATT places participants at a disadvantage.

It is difficult to enforce the GATT principles against the major country members.

Policy tool: Generalized system of preferences [GSP].

Policy area: International trade, trade barrier reduction.

What it is: The generalized system of preferences [GSP] is a program of temporary duty-free tariff preferences granted by the United States to developing countries.

Objective: To assist in economic development, encourage diversification, and expand production of certain developing countries.

When used: Title V of the Trade Act of 1974 sets forth criteria for country and product eligibility as well as for limitations on preferential treatment. Developing countries not eligible for GSP include communist countries, the developing country which extends preferential treatment to the products of a competing developed country, most OPEC countries, countries that nationalize U.S. property without compensation, countries that do not cooperate in narcotic control, or countries that have aided international terrorism. Import sensitive articles or commodities such as textiles are excluded from GSP.

Experience: Developing countries purchase over one-third of all agricultural exports and have been the fastest growing market for farm products. GSP has helped developing countries to buy U.S. products, although producers of some commodities have been adversely affected.

Consequences: Expand developing country imports into the United States.

Increase economic growth in developing countries.

Increase export earnings for developing countries so that they may also import more.

Help in maintaining favorable foreign relations with free world developing countries.

Low cost means of providing aid to developing countries.

Policy tool: Monetary export subsidies.

Policy area: International trade, export subsidies.

What it is: Monetary subsidies to exporters are direct dollar subsidies per unit of commodity sold.

Objective: To make the U.S. commodity price competitive in the world market and thus expand markets.

When used: Export subsidies can be used tp export agricultural commodities when U.S. price supports are above world prices. Overt monetary subsidies of exports are seldom made because they clearly violate the provisions of GATT. Under those provisions the United States could be required to pay damages to the countries injured by such subsidies. EEC subsidies do not violate GATT since they were in place as a part of the common agricultural policy at the time GATT was negotiated. The last major U.S. direct monetary export subsidy was in the 1972 Russian grain deal when a subsidy of approximatley $0.60 per bushel of wheat was provided. Political considerations are obviously involved in the use of such subsidies.

Experience: Export subsidies are overt methods of subsidizing exports. As such, they are readily determined to be a violation of

GATT and invite retaliation from competitors if they increase market share. There is more pressure to use export subsidies when the dollar is overvalued with respect to other currencies.

Consequences: The effective export price is lowered to make U.S. commodity prices competitive in the world market. The result is to expand exports.

Monetary subsidies run a high risk of inviting retaliation.

Monetary subsidies violate GATT.

CCC stocks are reduced.

Long-run price relief is provided for U.S. producers in the face of low world prices.

Monetary subsidies can be expensive in terms of both money and image.

Policy tool: Two-price plan.

Policy area: International trade, export subsidies.

What it is: A two-price plan discriminates between the domestic and the foreign market by charging a higher price for domestic sales than for foreign sales. Exports are, therefore, indirectly subsidized by the higher domestic price.

Objective: To make the level of producer returns while preventing the accumulation of large surplus commodity stocks.

When used: Before World War II and the negotiation of GATT, two-price plans were used extensively to support farm income. Since the negotiation of GATT, the operation of two-price plans has been restricted largely to marketing orders.

Experience: Two-price plans, in essence, make the world market a residual and largely unprofitable market. Advocating reduced trade barriers and operating two-price plans are obviously inconsistent.

Consequences: Producer income increases if the demand in the domestic market is more price responsive than in the export market.

Surplus stocks do not accumulate in the face of high domestic price supports.

Lower export market prices create the potential for price warring conditions.

The world market tends to become unprofitable when two-price plans are used extensively.

Controversial methods of being competitive would draw public media attention.

Domestic market is placed at a disadvantage relative to the foreign buyers.

In the case of cotton, the use of manmade fibers is encouraged.

Imported textiles are made even more competitive with domestic production.

Feed grain costs are increased to livestock producers, and food costs are increased to consumers.

Policy tool: Blended credit.

Policy area: International trade, export subsidies.

What it is: Blended credit is a form of export subsidy which combines Government export credit and credit guarantees with commercial credit in a single package to reduce the effective interest rate. Government export credit is provided in a program known as GSM-5. The credit guarantee program is known as GSM-102.

Objective: To make U.S. credit terms competitive with those offered by other exporting countries.

When used: Blended credit is available only when appropriations are provided by the Congress. Tight budgets have made blended credit available only to a limited number of countries and commodities. Countries are selected based on magnitude of surpluses and competitive need, as well as diplomatic and domestic political considerations. The blended credit program was most recently initiated in October 1982.

Experience: During the period used, blended credit facilitated the opening of markets for U.S. commodities in competition with other countries. It is particularly useful for those developing country markets where credit and credit guarantees are critical. The pressure for a blended credit program increases when a strong dollar reduces export price competitiveness.

Consequences: The United States is made more competitive in the face of other countries' subsidized export credit programs.

A basis is provided for penetrating new export markets—particularly in developing country markets.

Compared to other forms of export subsidies blended credit runs less risk of creating retaliatory trade conditions.

Expansion of subsidized credit encourages other countries to expand their programs, thus creating the potential for larger programs (Treasury costs) over time.

The potential for high Government costs is created by blended credit programs.

If successful in expanding exports, blended credit raises domestic food costs and production costs for livestock producers.

Policy tool: Public Law 480 (Food for Peace).

Policy area: International trade, export subsidies.

What it is: Public Law 480 provides for concessional sales of commodities involving price or credit terms that contain substantial U.S. subsidies. Exports are made under three Public Law 480 programs:

> Title I involves sales for dollars under low interest rates with up to 40 years repayment.
>
> Title II involves emergency food relief directed to nutritionally vulnerable groups.
>
> Title III involves commodity aid as part of a development package. Multiyear commitments are tied to specific development actions.

Objective: To dispose of surplus commodities, develop markets, provide emergency food aid, and assist friendly nations in development.

When used: Authorized by the Agricultural Trade Development Act of 1954, Public Law 480 was used to export as much as one-third of export sales during the 1950's and 1960's when loan rates were generally maintained above world prices. Since then Public Law 480 sales have generally been in the $1-$2 billion range. Countries are selected for assistance based on diplomatic and political considerations as well as need. Commodities selected are influenced by the magnitude of surplus stocks. The Secretary of State makes the final decision on who gets Public Law 480 aid.

Experience: Public Law 480 is credited with having built such important commercial markets for farm products as Japan, South Korea, Taiwan, Brazil, and Spain. The need to get commodities moving through Public Law 480 is frequently frustrated by foreign policy considerations. Title III aid is considered by recipients to be worth 10 cents on the dollar; it is thus an economically inefficient method of providing aid.

Consequences: A government alternative to exports is provided when the United States is not price competitive in the world market.

Commodity aid is combined with development assistance, thus being more politically acceptable.

Government stocks of commodities are reduced.

Long-term development of markets is promoted.

If used extensively, it becomes too costly, and the United States is subject to the charge of dumping commodities on the world market.

Public Law 480 provides the States Department with a diplomatic tool that can be used in foreign policy negotiations.

Public Law 480 sales may displace commercial sales.

Too much commodity aid can be a disincentive for production in developing countries and can make them overly dependent on imports.

Hunger and starvation assistance is provided.

Policy tool: Export PIK (Payment in Kind).

Policy area: International Trade, Export Subsidies.

What it is: Under export PIK, the Government provides an in-kind export commodity bonus in return for a regular commercial purchase of an agreed upon magnitude. For example, if a country purchases a million metric tons of wheat, it might receive an additional 100,000 metric tons of PIK wheat from CCC stocks. The 100,000-metric ton bonus is the export PIK.

Objective: To make the U.S. commodity price competitive in the world market and thus expand export markets.

When used: Export PIK was first used in a 1983 flour sale to Egypt. Legislation is currently pending in Congress that would make export PIK a more permanent part of U.S. international trade policy. Export PIK would be available only to a limited number of countries and for a limited number of commodities that are in surplus.

Experience: Export PIK was used to virtually capture the 1983 Egyptian flour market for the United States. Other flour exporting countries, such as France, were upset, although no overt retaliatory steps were taken against the United States.

Consequences: The United States is kept competitive in the world market, even in the face of reduced demand and loan rates that may be above the world market price.

Export PIK is less overt than direct monetary export subsidies and thus not as likely to invite either retaliation or GATT sanction.

Government stocks of commodities are reduced.

An export alternative is provided by export PIK as long as the CCC owns sufficient stocks.

Export PIK is a violation of at least the spirit of GATT.

Policy tool: Import quotas.

Policy area: International trade, import barriers.

What it is: Import quotas are quantity limits placed on the amount of individual commodities that can be imported into the United States or other importing countries. Limits are generally allocated among potential importing countries. Specific limits are frequently negotiated in the form of voluntary restraints to avoid more restrictive limits. The specific size of quotas may be either legislated, negotiated, or determined by executive action. Those determined by executive action under section 22 as interfering with the operation of the price support program are recommended by the International Trade Commission and are imposed by the President.

Objective: To prevent unrestricted quantities of certain commodities from entering the United States and unduly suppressing prices or interfering with the operation of the price support program.

When used: Beef import quotas have been mandated by the Congress. Cheese import quotas imposed to protect the price support program established in 1949 have been the subject of negotiation and agreement under GATT. Import quotas are also imposed on sugar under section 22. Import quotas exist on textile imports as a means of avoiding irreparable harm to the domestic industry.

Experience: The imposition of import quotas is highly political. Even though the International Trade Commission recommendations to the President are based on objective criteria, the ultimate Presidential decision is highly political. The existence of U.S. import quotas has made it difficult to get other countries to reduce trade barriers. Japan argues that its beef import quotas are no different from the beef import quotas of the United States.

Consequences: Import quotas restrict available supplies and raise domestic prices.

Textile import restrictions reduce export demand for U.S. cotton lint but may increase sales of domestic mills. Less overall demand is likely because of higher ultimate consumer product prices.

Without import quotas on price supported commodities, the CCC would acquire a larger quantity of commodities under the price support program.

Import quotas result in windfall profits to licensed importers.

Supply control aspects of import quotas result in greater price fluctuations than would occur in a free market.

Efficiency of production plays no role in determining competitiveness under a system of quotas.

Retaliation for nonagricultural commodity quotas can lead to reduction in agricultural exports from the United States.

Policy tool: Import tariffs.

Policy area: International trade, import barriers.

What it is: Import tariffs are a tax or duty on commodities entering the United States. A tariff may be either a fixed charge per unit of product imported (specific tariff) or a percentage of the value of the product imported (ad valorem tariff). The specific size of the tariff may be legislated, negotiated, or determined by Executive action.

Objective: To prevent commodities from entering the United States, to maintain the U.S. price above the world price, and to prevent imports from interfering with the operation of the domestic price support program. While at one time an objective of tariffs was as a source of revenue, this is no longer a major consideration in tariff policy.

When used: Because of the emphasis on GATT on reducing staff trade barriers, their importance has generally decreased. Yet substantial tariffs exist on a number of specialty commodities. The authority exists for the imposition of countervailing duties equal to the amount of export subsidies provided by other countries. Such countervailing duties are generally limited to those instances where there is a reasonable indication that an industry in the United States is being materially injured or threatened with injury because of subsidized imports. Antidumping duties may also be imposed if a commodity is sold in the United States at less than fair value in the event of a finding of material injury. Countervailing duty and antidumping duty actions involve determinations by both the International Trade Commission and the Department of Commerce.

Experience: The visibility and GATT emphasis upon reducing tariff trade barriers fostered the use of nontariff barriers to trade. Tariff barriers are less effective in reducing trade because they do not constitute an absolute limit on quantities that can be imported. That is while efficiency plays no role in quotas, tariffs potentially continue to reward efficiency.

Consequences: Tariffs raise the effective price of goods entering the United States and thereby reduce the demand for and comparative advantage of foreign goods.

Economists regard tariffs as a lesser evil than quotas or other nontariff barriers because with a tariff efficient producers may still be able to obtain access to the market.

Countervailing or antidumping duties offset export subsidy practices of other countries and, thereby, protect U.S. producers.

The U.S. Treasury receives the benefit of a tariff.

The absolute quantity of price fluctuation is the same or nearly the same with a tariff as in the free market. Price changes are, therefore, reflected to consumers.

Policy tool: Nontariff trade barrier.

Policy area: International trade, import barriers.

What it is: Nontariff trade barriers, strictly speaking, cover all restrictions on imports other than tariffs. Thus, quotas are nontariff trade barriers. Likewise, the variable levy (tariff) employed by the European Economic Community in its Common Agricultural Policy [CAP] is a nontariff trade barrier. For a discussion of these policy tools see import quotas and variable levy. The nontariff barriers discussed here include a wide array of devices such as health and sanitation, packing, packaging, and labeling regulations, as well as foreign exchange restrictions.

Objective: To prevent unrestricted quantities of certain commodities from entering the United States or other importing countries. Sometimes such restrictions may be legitimate. Others are outright protectionist devices.

When used: The use of nontariff trade barriers has increased in part because of the GATT emphasis on reducing tariff trade barriers. The most common U.S. nontariff restrictions relate to health and sanitation restrictions such as the prohibition of meat imports from countries having foot and mouth disease.

Experience: Nontariff trade barriers are generally more restrictive than tariff barriers since they may constitute absolute barriers to trade. Nontariff barriers have had a tendency to proliferate in recent years. Nontariff barriers have been used to reduce the competitiveness of foreign producers who are able to use pesticides that are banned in the United States.

Consequences: Nontariff barriers restrict available supplies and raise domestic prices.

May be an absolute barrier to trade with efficiency playing no role in determining competitiveness.

The imposition of a nontariff barrier may increase the degree of price variability.

Nontariff trade barriers increase the risk faced by importing firms.

Policy tool: Variable levy.

Policy area: International trade, import barriers.

What it is: A minimum price is set at which a commodity can be imported. If the import price falls below that minimum price, a levy or import tax is imposed equal to the difference between the world and the import price. A variable levy is classified as a nontariff trade barrier because the size of the levy is not fixed in either absolute or percentage terms.

Objective: To prevent commodities from entering the importing country by rising commodity prices above those prevailing in the importing country.

When used: The variable levy is the principal protectionist tool used by the European Economic Community [EEC] Common Agricultural Policy [CAP]. Under CAP the EEC farmers are guaranteed a feed grain price that is above the world price because all imported grain must pay an import levy equal to the difference between the EEC targeted producer price and the price of grain landed in Rotterdam.

Experience: The variable levy is a very effective barrier to trade because it eliminates the economic (price) advantage of the imported commodity. Under those circumstances, the domestically produced commodity will be purchased. Efforts to negotiate a less restrictive EEC agricultural policy have failed because the variable levy is the very basis of CAP. Getting rid of the variable levy would mean that the EEC would have to develop a whole new agricultural policy approach.

Consequences: A variable levy effectively eliminates imports and thus raises domestic prices up to a predetermined targeted level.

Efficiency plays no role in determining competitiveness under a variable levy policy up to the targeted level of producer returns off of which the variable levy is determined.

The variable levy constitutes a source of revenue to the importing country, when and if the targeted price is exceeded.

Policy tool: Export embargoes.

Policy area: International trade, embargoes.

What it is: Export embargoes set absolute limits on quantities that can be exported. An export embargo does not have to involve zero exports. It may state, for example, that up to 8 million metric tons [MMT] of grain may be exported. At 8 MMT the embargo goes into effect. Embargoes may be either general and apply to all countries or specific and apply to only one country. They may apply to one commodity or to all commodities.

Objective: To hold down U.S. commodity prices; to prevent shortages of commodities; to achieve a foreign policy objective; or any combination of the above.

When used: Since 1970 export embargoes have been imposed three times;

In 1973 an embargo was placed on the export of soybeans to provide assurance that poultry and hog producers would have a sufficient supply of soybean meal to continue efficient production.

In 1975 an embargo was placed on exports of grain sales to the Soviet Union after concern spread about increasing food prices and the rumor that bread prices would rise to $1 per loaf.

In January 1980 an embargo was placed on all exports to the Soviet Union after the Soviet invasion of Afghanistan and the subsequent tensions in Poland.

This embargo was not lifted until April 1981. Provisions of the 1981 farm bill require that the loan rates for grain and cotton be set at 100 percent of parity if only agricultural exports are embargoed.

Experience: Embargoes have been a major factor in reduced confidence in the United States as a dependent supplier. Therefore, the U.S. share of world trade has declined. Serious questions also exist concerning the effectiveness of embargoes as a policy tool or the willingness of the United States to enforce an embargo.

Consequences: Embargoes reduce U.S. export sales and lower prices.

Embargoes reduce confidence in the United States as a dependable supplier.

Embargoes encourage other countries to increase production as a means of achieving self-sufficiency.

Embargoes encourage competitive exporting countries to increase production.

It is difficult to prevent the intended embargoed country from importing the commodity from another source.

Policy tool: Sanctity of contracts.

Policy area: International trade, embargoes.

What it is: Sanctity of contracts provides that if an embargo on exports is imposed, exporters will still be able to fulfill their contract obligations for a period of 270 days after the imposition. Sanctity of contract provisions were included as an amendment to the extension of the Commodity Futures Trading Commission bill in 1983.

Objective: To assure importing countries that the United States is a dependable supplier and will deliver on the contract terms. A secondary objective is to reduce the impact of export embargoes on exporting firms and producers.

When used: After lifting the Soviet grain embargo in April 1981, producer organizations and exporting firms applied increasing pressure on the Reagan administration for sanctity of contracts. In 1982 President Reagan provided assurance that he would allow increased purchases by the Soviets with sanctity of contracts. This principle was written into law in early 1983 and applies to all agricultural export sales.

Experience: The abrupt imposition of the Russian grain embargo in January 1980 left U.S. producers and exporters with delivery commitments that were disallowed. While the U.S. Government provided compensation to exporters for losses incurred, long-term injury ensued to the reputation of the United States as a reliable agricultural exporter. This was one of several factors leading to a decline in the U.S. share of total world trade in the early 1980's.

Consequences: The United States is viewed as a more reliable supplier of agricultural exports.

Importers know that when they sign a contract for delivery of U.S. agricultural products, there will not be governmental interference with performance on it.

Exporters are assured their sales will be allowed.

Producers are shielded from the immediate effects of embargoes.

Policy tool: Long-term bilateral trade agreements.

Policy area: International trade, trade agreements.

What it is: A long-term bilateral trade agreement is a contract between two countries specifying the quantity of a commodity to be traded over a certain time period. Bilateral trade agreements normally run for a period of 3 to 5 years, although they may be simple 1-year agreements that are renewed annually. The agreements normally specify the minimum quantity to be purchased and the maximum quantity to be supplied. Generally no provisions exist with regard to the price to be paid.

Objectives: To provide assurance for the importing country and market assurance for the exporting country. In addition, trade agreements are utilized to normalize trade, develop markets, and retain markets for farm products.

When used: Trade agreements have become increasingly common since a world food shortage was experienced in the early 1970's. The most publicized agreement was the 5-year contract negotiated with the Soviets in 1975 which contained an agreement to purchase a minimum of 6-million metric tons of grain with the United States agreeing to supply at least 8-million metric tons. In the early 1980's the United States became cool to the trade agreement concept while Australia and Canada signed agreements with several countries including the U.S.S.R. and China. In 1983, the Reagan administration changed policy and renegotiated a new long-term trade agreement with the Soviets requiring purchases of between 9- and 12-million metric tons of grain.

Experience: Trade agreements are a means of getting a foot in the door of a market on a long-term basis. The quantities specified in the agreement have generally been less than the normal trading levels. Unwillingness to sign trade agreements in the early 1980's probably reduced the U.S. market share in export markets such as the U.S.S.R.

Consequences: The total volume of trade tends to be increased and stabilized between the parties to the agreement.

Importing countries outside of the agreement may be denied a source of the commodity if supplies become short.

Exporting countries outside of the agreement may be denied market outlets when supplies are plentiful.

Trade agreements are, in essence, barriers to trade in that they tie up markets over long time periods.

Trade agreements cause greater fluctuations in pricing since they effectively reduce the world supply which can be traded.

Policy tool: International commodity agreements.

Policy area: International trade, trade agreements.

What it is: An international commodity agreement is a multilateral agreement among countries to affect the terms of trade. The terms of trade affected by an international commodity agreement may include the price level, quantity sold, quantity produced, or quantity held in reserve. Legally, commodity agreements are treaties among the participating nations.

Objective: To raise the world price above the equilibrium levels, to stabilize price, and to provide increased supply assurance.

When used: Commodity agreements have been used most extensively on wheat, being first established in 1949. Currently they are used extensively among developing countries on commodities ranging from tin to sugar and coffee. Interestingly, OPEC might also be looked upon as an international commodity agreement.

Experience: Commodity agreements have had a reasonably good history of stabilizing prices as long as burdensome surpluses or shortages do not exist. Commodity agreements designed to raise prices have a tendency to fall apart because of a lack of control over production. To be truly effective, commodity agreements require close coordination of domestic farm programs with the activities of international commodity agreements.

Consequences: Commodity agreements provide increased price stability.

Domestic prices are raised.

Exchange of information among countries on market conditions is increased.

When prices are raised, excess supplies frequently accumulate.

Unless commodity agreements are well coordinated with the domestic farm programs of the participating countries, they tend to break down.

Policy tool: Barter/counter trade.

Policy area: International trade, trade agreements.

What it is: Barter is trade among two or more countries or firms involving the exchange of goods and/or services of equal value instead of currency or credit transactions as payment for a commodity.

Objective: To facilitate trade with developing countries experiencing short-run financial difficulties which make traditional commercial trade impossible. To obtain sources of supply of other commodities that might not otherwise be available.

When used: The first U.S. experience in a barter agreement in 15 years took place in 1982 with an exchange of surplus powdered milk to Jamaica for bauxite.

Experience: Barter has limited ability to expand exports. Rather, it is more of a temporary measure to maintain an existing market during periods of adverse economic conditions. Its greatest potential appears to be as a market development tool for developing countries with mineral or strategic metals of importance to the U.S. defense and industrial sectors. The biggest problem in barter is matching needs with products.

Consequences: Barter helps maintain export levels.

Barter provides increased potential for developing commercial markets for agricultural products.

Barter has limited applicability because of the required coincidence of need.

Barter may displace commercial sales.

Barter value generally approximates relative world market value of the commodities bartered.

PERSPECTIVES ON AGRICULTURAL TRADE FROM FORMER SECRETARIES OF AGRICULTURE

(Robert J. Tosterud, Senior Economist, Joint Economic Committee)

On September 27, 1984, four former Secretaries of Agriculture testified before the Joint Economic Committee addressing the subject "Perspectives on the Future of American Agriculture." Testimony was presented by former Secretaries of Agriculture Bergland, Knebel, Hardin, and Butz. While former Secretary Freeman was unable to attend the hearing, Senator Roger W. Jepsen, chairman of the Joint Economic Committee had placed in the record of the hearing the Freeman-authored pamphlet "Comparative Advantage in an Interdependent World: The Need for a Realistic Agricultural Policy for the U.S."

This paper is a summary of the remarks and opinions expressed by these five former Secretaries of Agriculture on the important subject of agricultural international trade.

Orville Freeman said that "During the late 1970's, the United States became, in many respects, a residual supplier. This occurred in part because of a very strong dollar and also because of price-support levels that were higher in some instances than the prices our competitors in world markets were able to offer. This we can no longer afford."

He offered two farm policy premises: The production capacity of the U.S. agricultural sector must not be seriously eroded. Second, there should be both fairness and equity support by our Government to the farmers who have contributed to our economic well-being. To carry out these two premises, Freeman offers a four component policy:

(1) Humanitarian.—The United States should reach out to help feed the truly needy people. To strengthen and to expand the U.S. contributions in drought-stricken Africa. In addition to relief, food aid should be tied into self-help projects focused on improving production potential.

(2) Development.—The United States should expand its economic development assistance programs to developing countries. Food aid can stimulate development in developing countries and the United States should make a substantial volume of wheat available through the International Monetary Fund to alleviate debt loans that plague these countries.

(3) Marketing minded.—The United States must expand its market development activities and closely coordinate them with our economic development initiatives.

(4) Competition oriented.—The United States must fight unfair trade competition wherever it occurs, particularly in those nations that use export subsidies or have erected protectionist import bar-

riers. Freeman emphasized that developing long-term strategies to prevent protectionist barriers and encouraging other nations to reduce or eliminate unfair levels of protectionism are very important.

In John A. Knebel's testimony, he cited the Fowler-McCracken Commission's survey. The greatest area for positive Government action is the promotion of fair and free trade on the part of all nations, including the United States. Knebel listed six methods to promote expansion of the U.S. agricultural export market:

(1) Market promotion activities for U.S. agricultural goods abroad.

(2) Increase multilateral trade negotiations to promote fair and free trade.

(3) Reduce trade barriers and unfair trading practices of other nations.

(4) Prohibit export embargoes on agricultural goods.

(5) Promote trade with nations lacking the hard currency to purchase U.S. products.

(6) Utilize food aid to expand overseas markets for our surplus production.

Clifford M. Hardin addressed the importance of learning from history. In the past 50 years, the United States has failed to learn two very important lessons. First, "unilateral efforts to reduce world supplies of export commodities by limiting U.S. production are an open invitation to foreign producers to expand their production under our price umbrella." And second, "When support prices are higher than world prices, * * * (Government) stocks rise and overhang the market in ensuing years * * *. Short-term benefits are usually translated into lower prices in future years." According to Hardin, such action may produce short-term benefits, but in the long-term, U.S. farmers pay because foreign competition, once in place, is not easily dislodged. Finally, because economic conditions, both in the United States and worldwide, can change quickly and unpredictably, the Secretary of Agriculture must have enough flexibility to adust programs to fit current market conditions and opportunities. Without this leeway, Hardin argued, the Secretary cannot make the appropriate adjustments in programs and the results can be devastating to farmers and costly to American taxpayers. It is critical that U.S. policies be flexible enough to permit American farmers, via the Secretary of Agriculture, to take maximum advantage of any unforeseen economic developments.

According to Earl L. Butz, a very serious and continuing farm policy problem is that the United States bases long-term predictions on short-term situations. This problem is perhaps best exemplified by our fostering of high support prices to enhance short-term farmer income at the expense of long-term export sales. This false signal overencourages national self-sufficiency by traditional food importers. Mr. Butz said he was alarmed with the current world drive toward economic nationalism and the trends toward rising trade barriers. This drive for food self-sufficiency is partly due to the political insecurity that grips so much of the world today. Butz commented that "from the standpoint of providing real food security in the world we're moving in the direction of raising social and economic costs of feeding the world because we are maintaining uneconomic areas and resources." To address this problem, according to Butz, the United States must improve efficiency; lower unit costs; utilize competitive pricing in export markets; implement favorable macroeconomic policies in the nonagricultural areas; maintain loan rates at market clearing levels; and signal to our competitors that "the honeymoon is over."

Bob Bergland asked the question, "How can we build a system founded on the principles of comparative economic advantage and fit into a turbulent world?" Governments establish food policies that sometimes neither recognize nor respect the doctrine of comparative economic advantage because no government would systemmatically deprive its people of enough to eat, according to Bergland. Governments usually act to restrict food imports in order to protect agriculture within their own country even if the cost is high. Any new farm program must deal with the fact that we supply nearly one-half of the world's food exports and that new growth in foreign markets is tied closely to the foreign policy of our country. Bergland commented that our policies must key in on poverty wherever it is found, and must fully appreciate the fact that three-fourths of the world's population who need what we have to sell have no way of paying for it. "We must distinguish between need and demand," Bergland said.

The significance of these statements is that every single former Secretary of Agriculture now believes that some current and past price-support programs have worked against trade and against the long-run interests of farmers. These opinions were expressed regardless of political affiliation or of the particular programs enacted during the respective Secretary's tenure. The Secretaries put particular emphasis on their belief in the principle of comparative advantage. They believe that American farmers possess comparative advantage in the world marketplace and that farm programs and trade policy must allow this advantage to work if we are to have a flexible, growth-oriented industry.

THE EUROPEAN COMMUNITY'S COMMON AGRICULTURAL POLICY

(By John F. Hudson)*

Evolution of the European Community

The foremost example in the Western world of a managed market approach to farm support is the Common Agricultural Policy of the European Community.

The European Economic Community [EEC] was established in 1958 by the Rome Treaty between six countries: Germany, France, Italy, the Netherlands, Belgium, and Luxembourg. The EC subsequently expanded to include the United Kingdom, Denmark, Ireland, and Greece. Currently Spain and Portugal are negotiating for entry.

The Rome Treaty provided one set of institutions to govern not only the EEC, but the European Coal and Steel Community and the European Atomic Energy Community, by which the six countries pursued joint development of their steel and nuclear power industries. These organizations are therefore commonly referred to collectively as the European Community [EC].

The central feature of the European Community is the customs union, or common market, created by removing all duties and restrictions on trade between the member countries, and adopting a common tariff for imports from the rest of the world. The Common Agricultural Policy is a unified price support policy devised to deal with the problems caused for agricultural support programs when the customs union was applied to agricultural products. Except in agriculture, the Rome Treaty calls only for coordination of national policies of the member governments in areas of economic interest: transportation and other service industries, movement of workers, social policies, rules of competition and rights to establish a business, and capital movements. In these areas member governments enact their own laws and regulations and agree to standardize them as necessary. Member governments enact and collect their own taxes, issue and manage their own currencies, and even maintain customs officers at border crossings between member countries to perform various services other than collection of import duties.

The common institutions for administration of the European Community include the Council of Ministers, the Commission, the Parliament, the Economic and Social Committee, and the Court of Justice.

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The Council of Ministers sets basic regulations for the operation of the EC, and it sets the standards to which member government laws must conform. The Council is made up of the cabinet officers, or ministers, from each member government, according to the subject on which decisions are needed: agriculture, finance, foreign affairs, et cetera.

The Commission is the civil service of the EC. It prepares recommendations for the Council and administers certain programs delegated to it—particularly for agriculture. The Commission also speaks for the EC member governments in economic relations with non-EC countries.

The Parliament does not raise taxes or appropriate funds, but it does pass on the budget for the Commission and other EC institutions and activities. Currently agricultural programs account for 65 percent of the budget. The Parliament also provides advice on EC Commission proposals.

The Economic and Social Committee is comprised of representatives of private trade organizations. Its function also is to give advice of Commission proposals.

The Court decides questions of member government conformance with EC agreements and regulations.

As indicated above, agricultural price support presented a special problem. When the EC was established in 1958 each of the six countries maintained its own farm policy, and there were great differences in levels of farm prices and means of agricultural support from one country to another. Restrictions on trade between the member countries could not be eliminated without devising a single support system which would be fair to all. It took until 1962 to put the first regulations into effect.

Differences in support levels had to be eliminated, and an EC price support level had to be set high enough to avoid injury to any large group. The most difficult early decision in establishing the common agricultural policy was to set grain support prices at levels which cut support for German, Italian, and Luxembourg farmers. Agreement was reached by allowing these countries to give their farmers a special subsidy for several years to compensate for their loss in income.

The price levels agreed on for most commodities were well above the average level of world prices, partly because of the need to preserve existing income levels and partly because of the relative inefficiency of European agriculture. The average European farm was and still is very small by American standards. In 1980, the average size was 39 acres; only 6 percent of all EC farms were larger than 124 acres (50 hectares).

High prices were essential to the preservation of a viable rural economy. As in the United States there has been a significant migration of workers from the farm to the cities. The number of farmers has been cut in half since 1960, but without policies to assure reasonable levels of farm income, accelerated movement to the cities would have created additional burdens which the EC was unwilling to accept.

It was also essential to permit competition between the member countries if the countries which had an advantage in agricultural production were to obtain the benefits foreseen in a common market. As a practical matter this meant there could be no controls on production, nor was it desirable to use quantitative import restrictions to sustain the high support price levels. A system of quantitative import restrictions would have meant dictating individual country quotas. Instead the Europeans chose the variable levy system which allows imports to enter any port and circulate freely within the EC after payment of a levy. Under the levy system imports are subject to a levy which varies with changes in market prices in order to offset the difference between the support price level and the lowest cost of imports.

Another reason for avoiding production controls was the desire to obtain greater self-sufficiency in food production—a policy objective easily understood in light of the food shortages which occurred at the close of World War II.

Finally it was essential that the new policy be financially sound. The variable levy system created revenues with which to pay for support programs and export subsidiaries as needed. A system which set support prices at world market levels and provided a deficiency payment to farmers to bring their income up to target levels would have created no revenue from imports and would have been far more expensive. Of course, the establishment of internal market prices at high levels penalized consumers, but consumers were already paying a high portion of their family budgets for food. In fact EC consumer incomes have grown over the years faster than food prices, so that food has become a progressively smaller share of consumer expenditures. The average EC household spends about 19 percent of its income on food compared to 16 percent in the United States. For a family with an income of $25,000 per year, the difference is $750. For the U.S. economy as a whole the difference is over $60 billion.

The Common Agricultural Policy today

The Common Agricultural Policy today is expanded and refined over what it was when the first regulations were issued in 1962. The basic concepts remain the same, however. Farm income is supported by managing the internal market price level. There are few serious restraints on production. Variable import levels assure that imports will always be priced higher than the domestic product. Export subsidiaries are available for products in surplus. This system, which varies from product to product, applies to more than 90 percent of EC production by value. Variable levies protect more than 70 percent of production including (with variations) grains, rice, olive oil, sugar, beef, pork, poultry, eggs and dairy products. No support prices are set for poultry and eggs; prices for these products are maintained solely by the import levy and export subsidy system. There is limited support for pork, and in the case of beef, price support purchases are phased out at predetermined price levels. In a few cases it was decided not to make the consumer pay the full cost of support through the market price; instead the market price is pegged a bit lower and the difference made up by a direct subsidy. This procedure applies to durum wheat and EC grown oil seeds.

Where support prices apply, they are maintained by government purchases, much as in the dairy program in the United States. The

EC does not use price support loans. Member government agencies are the immediate owners of the stocks they purchase, and may dispose of them within certain guidelines. the usual procedure for disposing of government stocks is to tender them for export with a subsidy. For a number of products the EC does offer subsidies for private storage. These, however, are not designed to build up farmer owned reserves, but rather to permit a more orderly management of government stocks or, in the case of commodities (especially pork) where there is not an intervention program, to help support prices during periods of excesive supplies.

While variable levies apply to the products listed above, administration of the levy system is not uniform. The tighest control is maintained over the grain market, where levies are set daily according to a complicated formula which relates price quotations at various points outside the EC, for different grades and types, to a calculated equivalent at Rotterdam for each EC grain of a specified grade and type. The lowest calculated price is then deducted from an EC "threshold price," which in turn is set higher than the intervention price support level. The levy so determined is applied to all shipments of the grain in question, regardless of the actual price or grade. For pork, poultry and eggs, the levy is a combination of an amount based on the amount of food grain used to produce the livestock product plus an element for additional protection. These levies are set only every 3 months but additional supplemental levies may be set in the interim if imported products can be offered at less than a minimum import price (or gate price). In the case of dairy products, basic levies are calculated for certain pilot products (milk, butter and certain cheeses) and a complicated system of derivative levies applies to other products according to their butterfat content. Dairy levies are set about once a month but may be set more often if needed.

For beef the levies apply on top of a fixed import duty. However the duty and in some cases even the levy may be waived for certain products, like hotel beef within specified limits set in trade negotiations or imports for processing.

The EC also uses minimum import prices or "reference" prices for a number of other products, especially in the horticultural sector, as a basis for levying additional charges on imports offered at less than that price. These charges may not apply to all shipments or all countries. They are used for a number of the most important fruits and vegetables, for wine and for fish.

Import licenses are required in nearly every situation where variable levies are used. The licenses provide a means of monitoring import levels, and more importantly licenses usually specify the amount of the levy to be applied. The levy can by this means be fixed in advance of importation and provide a means of hedging against future price changes.

Perhaps one of the more interesting features of the levy system results from the fact that the agricultural products to which it applies are often raw materials for the manufacture of processed foods, and some industrial products. Consequently there is a large range of processed products which are subject to the levies as well as import duties. The levies are fixed in proportion to the amount of agricultural raw material assumed used in the product. For example, a cake mix will be subject to an import duty as a processed product and subject also to a levy in proportion to the amount of flour, eggs, milk and sugar it contains. These import charges, of course, add to the cost of the processed food and make it difficult for the manufacturer to remain competitive on export markets. Hence the EC is obligated also to extend export subsidies to these processed goods. In one or two cases the EC gives a production subsidy to the manufacturer instead. The most significant examples are subsidies for the manufacture of starch and beer. The starch subsidy also provides a degree of support to the potato market which is not otherwise covered by the Common Agricultural Policy.

The fixing of export subsidies also varies in administration. In most cases the EC Commission publishes subsidy rates which may be obtained simply by applying for an export license valid for a specified period of time. The export of government stocks, however, is done by tender, and such exports can often be significant in volume. Subsidy rates are set by the European Commission on the basis of periodic meetings with market experts from member governments who have determined where the best marketing opportunities lie. The subsidy rates, therefore, reflect the amount of money necessary to assure the sale of EC products in individual markets in competition with other countries. Rates will vary from week to week or even more frequently and by destination.

For products less widely grown in the EC there are a variety of special production or income subsidies: flax, cotton, hops, silk, seeds, alfalfa, fodder peas. Where export markets have been difficult to find for EC surpluses, there are additional domestic consumption subsidies. Examples are subsidies for the use of dairy products in institutional feeding, subsidies for the use of milk in calf feed and sometimes also pig and poultry feed, and subsidies for denaturing of wheat.

Tobacco provides a unique example of a product for which there is a price support system without protection by variable levies. Import duties apply but imports from many developing countries are exempt. EC producers are protected instead by subsidies to EC tobacco manufacturers for the use of EC-grown tobacco, by export subsidies, and by the government purchasing and marketing of state monopolies in the principal growing countries, France and Italy.

Results of the policy

In summary, the EC has relied almost exclusively on price policies and subsidies to guarantee a satisfactory level of farm income. Disincentives to production have been introduced for certain products—for example, subsidies for the slaughter of dairy cows, quotas on the quantity of sugar production eligible for full price support and recently quotas on milk deliveries to dairies. These measures, however, have not resulted in a significant decrease in production although the recent dairy quotas appear to be more effective than previous attempts to control production. The common pricing and production policies for sugar, for example, were introduced in 1967 when the EC was a major net importer of sugar. Today the EC produces nearly 50 percent more sugar than it consumes. In fact, the European Community is now not only the world's largest exporter of sugar but also the largest exporter of dairy products, pork, eggs, broilers, wheat flour and last year the third largest exporter of beef and veal. Based on 1985 forecasts, however, the EC will move to the number one position in beef exports also. For all of these except dairy products and pork, the EC was a major net importer in the 1960's.

As phenomenal as this growth has been, it has not been successful in increasing farm income at a pace equal to growth in nonfarm income. In its 1983 annual report on the agricultural situation in the Community, the EC reported that input price increases in the last decade have been so great that it is practically impossible to offset them completely by increases in farm gate prices without forcing the markets out of equilibrium and generating excessive costs. Price support increases and inflation raised the prices of agriculural production 90 percent from 1973 to 1982, but in the same period of time the price of imputs rose 125 percent. On the other hand, if year to year fluctuations are ignored, the index of farm income has not actually declined over this period. The issue, therefore, of greatest concern to EC policy makers is how to meet the cost of the program—a program still based on an open-ended commitment by the government to buy any quantity offered to it and to export all surpluses produced.

EC programs for agriculture in 1984 are budgeted at $13.4 billion, of which $8.1 billion is for intervention costs (primarily government purchasing) and $5.3 billion for export subsidies. Because of the unrestrained growth in EC production and the effectiveness of import protection, levies on imports now generate relatively much less revenue. Meanwhile the cost of intervention and export subsidies has sharply increased. For example, in 1967 when the European Community was only six countries, the total cost of EC support programs was only $1.3 billion, of which $900 million was for export subsidies. Receipts from import levies covered 45 percent of the total. The 1984 budget for the current programs for 10 countries totalled $13.4 billion, as indicated above. Levies were sufficient to fund only 12 percent of these agricultural programs. Agricultural programs have always been the largest part (65 percent in 1984) of the European Community budget, which is funded by receipts from levies, customs duties, certain other fees, and contributions from member states equal to one percent of the value added tax. Steps are under way at the present time to increase the latter percentage. Emergency measures have been adopted in the interim—special contributions from member countries—to enable the EC to pay its bills. Final decisions on funding, however, depends on reaching agreement to assure that spending will not exceed projected revenues.

FOREIGN SUBSIDIZED COMPETITION*

TALKING POINTS AND EXAMPLES

Export subsidies are an unfortunate part of today's international agricultural trade picture. Foreign government assistance to production, processing and exports is faced by U.S. exporters of almost all agricultural products.

The U.S. Government has attempted to deal with the most flagrant offenders—especially the European Community which has used direct payments to exporters both to stabilize domestic prices and to expand greatly its share of world trade in wheat, flour, beef, poultry, sugar, and other products. (Examples of EC subsidy rates are attached.)

Direct export subsidies, however, are only part of the problem. Special credit programs (which we use on occasion) are part of the picture, as are:

—subsidized freight rates (Canada);
—payments to processors of tomatoes, peaches, raisins, tobacco (EC); and
—tax rebates and other tax incentives (Brazil, Argentina, Spain, Malaysia).

Production aids, including price support programs, are widespread and clearly affect the level of supplies available for export. Most countries operate such programs with a view to stabilizing farm income of maintaining a certain degree of self-sufficiency in food, but in a few cases the impact on production and exports has been enormous. The European Community has changed from a large net importer of beef to the world's second largest exporter. Taiwan has boosted rice production and exports with heavy subsidies. Following a section 301 complaint by the Rice Millers Association, Taiwan agreed earlier this year to cut back its exports.

A more difficult situation to evaluate is when the government is the exporter. East European countries price their exports without reference to normal cost consideration. This has proved troublesome, for example, in export markets for eggs. Western countries often use marketing boards for both price stabilization and export marketing purposes. Subsidies in some cases are significant. The South African Maize Board has provided a subsidy of $50.60 per ton on corn exports for the last years. More often such boards do not subsidize, but they are still viewed by some as a supportive factor not present when marketing is left to private enterprise.

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Several countries have taken the European Community to the GATT on the EC's subsidy practices, especially for sugar. The United States has used the GATT procedures with respect to EC export subsidies on flour, pasta goods, and poultry, as well as sugar, and EC processing subsidies on canned fruit and raisins. We have also gone to the GATT on Brazilian subsidies on poultry and soybean products. Procedural delays have prevented conclusion of these cases. (Details attached.) The EC and Brazil also brought counter cases against U.S. practices.

A tabulation attached gives a fuller picture of the nature and extent of foreign government assistance (other than aids to production) in relation to U.S. exports.

Also attached are country-by-country description of major government programs that assist exports and illustrations of subsidies for specific commodities.

ILLUSTRATIVE EXPORT SUBSIDY RATES

Information on export subsidy rates in dollars per ton is difficult to obtain, because they are usually not published, and under most programs will vary with each transaction or be granted in a manner not directly related to specific shipments (as with certain tax incentives). That export subsidy rates can be substantial will be seen from the following partial data published for the European Community and Sweden. EC rates vary by destination and by other factors as indicated.

Product	Date or period authorized	Dollars per metric ton
Wheat:		
European Community	1-1-84	12-29
Sweden	1981-82	90
Wheat flour: European Community (varies by ash content)	1-1-84	37-54
Barley:		
European Community	1-8-84	0-25
Sweden	1981-82	57
Rice: European Community:		
(Husked, long grain)	7-1-84	0-85
(Milled, long grain)	7-1-84	0-106
Rapeseed:		
European Community (plus processing subsidy)	7-13-84	0-39
Sweden	1981-82	NA
Beef:		
European Community (varies by cut)	5-12-84	300-2400
Sweden	--	1078
Pork:		
European Community (varies by cut)	7-16-84	133-500
Sweden	--	1255
Poultry:		
European Community (varies by type and cut)	6-7-84	78-204
Sweden	1981-82	NA
Eggs:		
European Community (in shell)	6-7-84	102
Sweden (in shell)	1981-82	712
European Community (dried, whole)	6-7-84	462
Butter:		
European Community	7-1-84	980
Sweden	1981-82	98
Cheese:		
European Community (emmental, gruyere)	7-1-84	0-1055
Sweden	1981-82	352

Product	Date or period authorized	Dollars per metric ton
Oranges: European Community (by type)	6-19-84	41-114
Lemons: European Community	7-18-84	63-94
Apples: European Community	7-18-84	31-94
Grapes: European Community	7-18-84	38
Raisins: European Community	5-31-84	81
Almonds, shelled: European Community	7-18-84	76
Walnuts, unshelled: European Community	7-18-84	110
Tobacco: European Community (varies by type)	1984	235-564

Notes.—EC data are from the Official Journal of the European Community and are converted from European currency to Units at 1 ECU=$US 0.7833.

Swedish data are from information supplied to the General Agreement on Tariffs and Trade and are converted from Swedish kronor at 1 kr=$US 0.1667.

SUBSIDIES: COUNTRY AND COMMODITY PROBLEM AREAS

The following country reports are brief examples of the variety of export assistance programs. Costs have been included when available; however, governments are hesitant to report budget data, so little information is available.

Argentina.—Argentina's primary tool for increasing or decreasing exports is an export reimbursement (called a reembolso) or an export tax. Their rates and product coverage change frequently. These tools are used to encourage domestic processing and export of high value goods. Prime examples are encouragement of vegetable oils (soya, sunflower) rather than the beans and seeds, and of leather goods rather than of cattlehides. Apple juice subsidies have also been frequently cited by the trade. In times past, Argentina has subsidized wheat sales but only on a very limited basis. In recent years, Argentina has not subsidized its wheat exports but does discount its posted market prices in order to sell its surplus.

Australia.—The Australian Wheat Board [AWB], a marketing board organization, provides extended payment terms to certain markets. The Export Finance and Insurance Corporation of the Australian Government provides export credit insurance to the AWB.

Australia also markets its wheat through the marketing board, but as a rule has not subsidized the sale of wheat into the export market. As a result of a record wheat crop last year of 22 million tons, Australia has undertaken an aggressive marketing compaign and has increased its credit guarantees for wheat purchases to $700 million. Previously, Australia emphasized cash markets. In addition, about 5.5 million tons of last year's crop was damaged by wet weather. The Australian Wheat Board [AWB] has sold a good portion of this in the form of feed wheat. However, much of this wheat is actually intended for human use: for example, approximately 500,000 tons of the offgrade though millable wheat has been sold to Bangladesh for human consumption. Other sales have been made to Mexico and South Korea. Australian sales of damaged wheat, much of which will be utilized for human consumption, have the potential for displacing U.S. wheat and coarse grain exports in numerous markets.

Australia also has underwritten apple and pear exports, and underwrites sultana production to guarantee a minimum return. Australia provides a rebate on sugar exports, which varies with the world price of sugar and reached A$142.50 (US$157.89) in February 1983.

Austria.—Payments are made for the export of slaughter cattle and beef to certain destinations; in 1983 they totaled 480.1 million Austrian shillings (US$26.7 million). Austria has a coresponsibility system with the grain industry to aid export sales, and an intervention system for bread grain financed by the Government.

In October 1983, Austria signed a contract with the U.S.S.R. for delivery of 244,000 tons of wheat and barley at a subsidy of about $68 per ton. Austria is also under agreement with East Germany to supply 350,000 tons of grain annually at what is believed to be subsidized prices.

Brazil.—The Government of Brazil provides a credit premium on exports of "industrialized" products. At present the nominal rate is 11 percent of the adjusted f.o.b. invoice values. Credits in 1982 amounted to 188.9 billion cruzeiros (US$1,052 million). It also provides an income tax exemption for exporters under certain conditions; in 1981, tax exemptions totaled 53.1 billion cruzeiros (US$570 million). There is also working capital financing for export producers, which totaled 471.3 billion cruzeiros (US$2.6 billion) in 1982.

Pressed by the need for foreign exchange earnings, Brazil exported corn in 1982 at a price below the acquisition cost to Government. This amounted to a subsidy of between $5–$10 per ton. Indications are that at least 100,000 tons went to Spain, a market largely dominated by the United States.

Brazil and the European Community have profited especially by subsidies on poultry. U.S. exports of whole broilers dropped by an incredible 71 percent in 1982 to 38.9 thousand metric tons compared to 134.5 thousands tons in 1981, followed in 1983 by a 66 percent drop to 14 thousand tons. The value of whole broiler exports fell from $169.5 million 2 years ago to $17.5 million in 1983. Substantial declines in key markets like Egypt and Iraq accounted for most of this sharp decline. Through that time period U.S. suppliers were facing a $350–$400 per metric ton price disadvantage for whole broilers and 20 cents per dozen disadvantage for eggs in selected Middle East markets compared to subsidized prices from the EC and Brazil. Domestic broiler prices have risen now, reaching $1,350 per metric ton to which a minimum of $130 must be added for transportation and handling. With C&F quotes in the Middle East running in the $990–$1,100 per metric ton range for broilers we are now looking at a subsidy range of $350–$500 per metric ton.

Our competitors unload poultry meat at lower prices through a number of mechanisms. The French and other EC suppliers use export subsidies, which now run around $220 per metric ton, in addition to producer subsidies. From 1978 to 1983 production of whole chickens in France's three largest poultry firms increased by at least 52 percent, largely due to regional investment grants and subsidies for enterprises which stock, process, and distribute agricultural products. These subsidy programs can be combined so that as much as one-half of the investment for each poultry slaughtering plant may be subsidized. Virtually all of the production from these plants is exported.

Brazilian poultry exporters are eligible for subsidized financing and are exempt from corporate income taxes on export sales. Poultry producers receive rural credit loans at below market rates, and in the past have received subsidized corn if they could prove that they exported poultry.

The same subsidizing exporters are now encroaching on our markets for chicken parts in the Far East. Brazil has successfully test marketed chicken legs in Japan and is reportedly shipping parts to Hong Kong as well. In 2 years, these subsidizing exporters displaced almost 90 percent of U.S. export sales of whole chickens, and now they threaten to do the same to our sales of parts.

Canada.—Canada subsidizes rail freight costs for certain grains, oilseeds, and products from the prairies provinces to the coasts under the Feed Freight Assistance Program and the Crow's Nest Pass Rate. It exports wheat and certain products through the Canadian Wheat Board [CWB].

The CWB is a quasi-private organization that lists prices of wheat sales on a daily basis but which frequently sells wheat to importers at prices below listed export levels, particularly during the last 2 years or so while the world wheat market has been very competitive. Another way in which the CWB subsidizes (or aggressively markets) its wheat sales is by signing a contract for a specific grade of wheat and then subsequently shipping the importer a higher quality grade of wheat but at the price level of the lower quality grade.

European Community.—The European Community makes restitution payments (export subsidies) available to virtually all basic commodities produced within the EC and to the processed products made from them. 1982 and 1983 expenditures on export restitution payments totaled $5 billion and $5.4 billion, respectively. (See attached tables.)

The EC has been moving 15 million tons of wheat/wheat flour annually on the world market (outside EC member countries) for the last 4 years. None of the wheat sold by the EC would be competitive on the world market if EC exporters were not paid a sizable restitution on the order of $60 to $70 a ton. The amount of restitution on EC wheat exports varies depending upon the region of the world to which it is shipped (such as Middle East Africa, Far East, et cetera). The EC has also heavily subsidized flour exports by as much as $70 per ton. This has directly contributed to the decline in commercial U.S. flour exports. For example, since the early 1960's, U.S. commercial exports of flour have fallen from around 750,000 tons to about 200,000 to 300,000 tons annually. The U.S. share of commercial flour trade has declined from about 25 percent to an average of around 9 percent. Due to export subsidies, the EC share has increased from about 25 percent to 80 percent.

The EC subsidizes barley exports by as much as $40 per ton. In 1983–84, 2.5 million tons were exported, with Algeria, Saudi Arabia, Spain, and the U.S.S.R. the largest markets.

EC export subsidies on rice have been in excess of $200 per ton. In CY 1983 Italy, the major EC rice producer and exporter, exported about 440,000 tons of rice, with Middle Eastern and North African countries the largest markets outside other EC members.

West Germany has a clearing agreement with East Germany that provides a high subsidy for West German grain exports. In the agreement, both West and East German currencies are treated equally. However, because the West German mark is worth roughly four times its eastern counterpart, this arrangement represents a very substantial subsidy which is sufficient to more than equalize the lack of EC export restitution or subsidy on grain. For the first time, West Germany exported 150,000 tons of wheat and 50,000 tons of barley this spring to East Germany under this agreement.

France has an export credit system which combines private and public financing. Credit insurance is provided by Coface, a quasi-public organization. Credit may be offered which would not be commercially available, or with automatic access to official finance credits, thus being easier to obtain than regular commercial credits. (For comment on EC poultry subsidies, see discussion for Brazil.)

An illustration of a particularly troublesome situation is the effect of EC subsidies on U.S. apples exported to the Middle East. The EC has now for many years provided a lucrative subsidy for apples moving to a number of destinations, including the Arabian Peninsula. The current subsidy is equal to 12.00 ECU's per hundred kilo, currently equivalent to about U.S. $1.79 per 42 lb. carton, or roughly about 15-20 percent ad valorem. This subsidy has been particularly annoying since we have established a reasonably good volume market, especially in Saudi Arabia. Although these Middle East markets have expressed a preference for American red varieties of apples, the EC subsidy is sufficiently attractive to swing some trade in favor of France, the principal EC participant in the subsidy program.

Finally, it should be noted that the EC provides processing subsidies for certain fruits and vegetables—currently from 1.5 cents/lb. to 49 cents/lb. for various tomato products and 4.7-7.9 cents/lb. for canned peaches. An export subsidy of 3.6 cents/lb. was established on May 31 for raisins shipped to North Africa and East Europe. The latter subsidy is separate from the assistance that was the subject of the U.S. GATT complaint.

Finland.—Finland has a price compensation scheme which finances the difference between domestic and world prices for inputs of major agricultural raw material components. The product may then be exported. It also pays export dairies a refund to cover the difference between domestic and target milk prices. A similar system exists for eggs, beef and veal, pork, mutton, barley, and oats. This refund program cost 1,923 million Finnish marks (US $515.5 million) in 1980, 2,345 million Finnish marks (US$543.4 million) in 1981, and 2,221 million Finnish marks (US$460.7 million) in 1982.

India.—India has a cash compensatory support system to compensate for taxes and levies on inputs used in export production.

Israel.—Israel markets citrus through a Citrus Marketing Board and its noncitrus products through Agrexco, a quasi-government agency. Products excepted from the Agrexco monopoly are avocados, poultry products, and flowers. The Israeli Government does not publish information on the budgets of these agencies.

Japan.—Japan makes food aid shipments of rice. The deficit in the control account of rice, wheat and barley under the food control special account for fiscal year 1982 is estimated to be 526.3 billion yen (US$2.1 billion), excluding the deficit from the surplus disposal of rice. (This figure includes domestic program measures on all three products.)

Japanese producer prices for rice are much higher than world prices, and in the past have stimulated production far in excess of domestic demand. In order to dispose of the surplus, export subsidies have reached over $1,000 per ton. In 1980, Japan exported 795,000 tons. Since then, exports have declined because of bad weather and a rice diversification program. However, with the relaxation of the diversification program and the return of favorable weather, Japan could again be in a position to export.

Below is presented a table illustrating the extent that Japanese rice exports have been subsidized over the past 5 years. It should be noted that the concessional sales shown below carry liberal terms; that is, 20 years at 3 percent after a 10-year grace period at 2 percent, not unlike the terms of the Public Law 480 program.

JAPANESE RICE EXPORT SUBSIDIES

Calendar year	Producer[1] price ($/MT milled)	Export[2] price ($/MT milled)	Total[2] exports (1,000 MT milled)	Amount of subsidy ($/MT)	Annual[3] subsidy cost ($1000)
1983	1,405	337	239	1,068	255,252
1982	1,325	381	318	944	300,192
1981	1,478	479	193	999	192,807
1980	1,432	382	300	1,050	315,000
1979	1,451	283	168	1,168	196,224

[1] Source: The 59th Statistical Yearbook of MAFF, 1982-83. Milled price calculated using a 0.91 conversion ratio.

[2] Source: Japan Exports & Imports, Commodity by Country, Japan Tariff Association, Various Issues. Includes some food aid exports.

[3] Annual subsidy cost may be overstated, due to inclusion of food aid rice in total rice exports.

Note.—Values calculated utilizing the following exchange rates: 1983: $1=238 yen; 1982: $1=248 yen; 1981: $1=220 yen; 1980: $1=226 yen; 1979: $1=218 yen.

New Zealand.—New Zealand has a tax credit to encourage export market development, and a program of loans which convert to grants, based on export sales levels. All major agricultural commodities are marketed through governmental marketing boards.

Norway.—Norway provides price supports on certain agricultural commodities. Exports of beef and veal, pork, cheese, barley, and eggs have to be subsidized in order to move at world prices.

Pakistan.—Pakistan provides an income tax exemption of up to 55 percent for certain export income, and an export finance scheme which provides refinancing to commercial banks at zero interest against the latter's advances to finance exports of commodities other than rice, wool, hides, skins, and leather.

South Africa.—The use of marketing boards aims to assure that domestic prices are not significantly influenced by world prices. As an example, the Dried Fruit Board, which handles raisin exports, pays the producers at prices calculated on a pool basis with money earned in the domestic and export markets pooled, and adjustments made on the basis of a crop's sales. The Tobacco Board may supplement export receipts with funds derived from levies on domestic sales. Similarly, South African losses on exports of chilled or frozen beef are financed by the Meat Board's Stabilization Fund.

The South African Maize Board subsidizes exports by purchasing domestic corn at prices well above world market prices and in turn selling corn for export at much lower prices. In the export expansion drive of 1982–83, the subsidy reached as high as $60 per ton. In that year, South Africa exported 4.7 million tons of corn. However, South Africa has not exported for the past two seasons because of drought. The United States has often filled the markets that South Africa was unable to supply. For example, the United States and South Africa were major sources for Taiwan's corn imports which total about 3 million tons annually. Because of South Africa's drought, the U.S. share rose from 65 percent in 1981–82 to 93 percent in 1983–84. The return of subsidized exports from South Africa could cut directly into U.S. markets.

Spain.—Spain has a variety of measures to support the agricultural sector. Agricultural subsidies totaled 83.3 billion pesetas (US $902.4 million) in 1981, of which 3.0 billion (US$33 million) were for export refunds. Spanish export incentive programs include (1) a rebate of internal taxes on exports of virtually all commodities; (2) a revolving-type credit for working capital granted by Government banks to exporters; (3) Government-subsidized rate on credit for the prefinancing of exports; (4) an export payments insurance program with subsidized premiums (applies primarily to losses related to the cancellation of exports contracts); and (5) direct export subsidies which in 1983 were limited to tomato paste. The Government granted a 16 peseta (or 12 cents US) per kilogram restitution on paste exports to all destinations except the United States, with a limit of 33,000 metric tons of paste in the 1983–84 marketing year.

Sweden.—Sweden provides price supplements for certain products, regional aids to production, income support, and export refunds; the total of these programs was 5.1 billion kronor in fiscal year 1981–82. Export refunds are paid on most agricultural products to cover the difference between domestic and world prices; they totaled 1.4 billion kronor (US$276.5 million) in fiscal year 1981–82.

Switzerland.—Switzerland provides subsidies to cover the difference between earnings from the sale of cheese on domestic and foreign markets. It makes payments to export dairies based on the amount of milk use (in July 1982, payments ranged from 45 to 60 centimes (22 to 30 US cents) per kilogram of milk, depending on the product). In 1982, Switzerland paid subsidies of 30.8 million Swiss francs (US$15.2 million) to maintain exports of cattle; it also pays domestic subsidies for cattle, apricots, wine, grapejuice, and table grapes.

Taiwan.—With burgeoning rice stocks Taiwan has pursued a policy since 1977 of sharply increasing its support prices while at the same time heavily subsidizing its rice exports. Mid-year rice sales were made in the region of $240–$260 per metric ton, compared with the Government's acquisition cost for domestic rice of about $700 per ton (unadjusted). Exports in 1983 rose to 550,000 tons. This prompted the Rice Millers Association to file a petition under section 301 of the 1974 Trade Act on July 13. After an investigation by USTR and consultations with Taiwan, an agreement

was signed March 1, 1984, whereby Taiwan agreed to limit its annual rice sales to 1.375 million metric tons over the next 5 years. (Shipments in 1984 limited to 375,000 tons.)

EC EXPENDITURES FOR AGRICULTURE—1982 AND 1983

[Monetary units in millions]

	Total				Intervention				Export subsidies				Subsidies as percent of total appropriations	
	1982		1983 [1]		1982		1983		1982		1983			
	ECU	US	ECU	US	ECU	US	ECU	US	ECU	US	ECU	US	1982	1983
Guarantee section:														
Cereals and rice	1,875	1,838	2,548	2,268	769	754	1,004	894	1,106	1,084	1,544	1,374	59	61
Sugar	1,242	1,217	1,434	1,276	498	488	526	468	744	729	908	808	60	63
Olive oil	493	483	676	602	484	474	671	597	9	9	5	4	2	
Oilseeds	707	693	1,070	952	703	689	1,065	948	4	4	5	4		
Fruit and vegetables	914	896	1,085	966	855	838	1,020	908	60	59	65	58	7	6
Wine	571	560	634	564	539	528	602	536	32	31	32	28	6	5
Tobacco	672	610	668	595	605	593	645	574	17	17	23	20	3	3
Dairy	3,328	3,261	4,708	4,190	1,807	1,771	2,901	2,582	1,521	1,491	1,807	1,608	46	38
Beef and veal	1,159	1,136	1,474	1,312	515	505	772	687	644	631	702	625	56	48
Pork	112	110	180	160	16	16	30	27	96	94	150	134	86	83
Poultry meat and eggs	104	102	125	111	0	0	0	0	104	102	125	111	100	100
Processed products	414	406	320	285	0	0	0	0	414	406	320	285	100	100
Other agricultural products	539	528	585	521	525	515	585	521	14	14	0	0	0	0
Monetary compensatory amounts	313	307	412	367	0	0	0	0	290	284	383	341	93	93
Total	12,406	12,158	15,919	14,168	7,352	6,543	9,821	8,741	5,054	4,953	6,069	5,401	41	38
Guidance section	722	707	653	581										
Total	13,128	12,865	16,572	14,749										

[1] Appropriations.

Note.—Columns may not add due to rounding.
Average for 1982, 1 ECU=$0.98; average for 1983, 1 ECU=$0.89.

TOTAL EC AGRICULTURAL EXPORTS AND EXPORT REFUNDS, 1983

[Dollars in millions]

Commodity [1]	Agricultural exports		Export refunds [2]	Refunds as a percentage of exports to non-EC countries
	Total	To non-EC countries		
Grains and preparations	$8,383	$3,595	$1,374	38
Milk and products	8,515	2,969	1,608	54
Agricultural oils and fats	3,154	935	8	1
Sugar and preparations	2,409	1,463	808	55
Beef and veal	3,842	668	625	93
Pork	3,800	603	134	22
Poultry and eggs	1,515	552	111	20
Fruits and vegetables	4,733	1,028	58	6
Wine	2,763	1,240	28	2
Tobacco, unmanufactured	435	214	20	10
Processed agricultural products not specified above	12,081	4,320	285	7
Other (residual)	17,586	5,849		
Total	[3] 69,217	[3] 23,429	[4] 5,401	23

[1] Nimexe items used for groupings were: grains, ch. 10 all, 1101, 1102, 1902, 1903, 1905 to 1908; milk, 0401 to 0404; fats and oils, ch. 15 all; sugar, ch. 17 all: beef, 020104 to 020127, 020684 to 020691, 160252, 160253; pork, 020131 to 020154, 020178 to 020194, 020611 to 020682, 160226 to 160249; poultry 020201 to 020390, 160215 to 160224, 040501 to 040570; fruits and vegs., ch. 8 all, ch. 20 all, wine 2205 and 2206; tobacco, 2401; processed agricultural products, chs. 5, 6, 9, 18, 21, 23 all, 4101, 5301 to 5305, 5501 to 5504.

[2] Appropriations (actual expenditures not yet available).

[3] Consists of trade in NIMEXE chs. 1 to 24, plus 4101, 5301 to 5305 and 5501 to 5504.

[4] Includes monetary compensatory amounts (MCA's) not included in individual categories above (383 million ECU's or $341 million).

Source: Eurostat Nimexe (trade data) and EC Official Journal (export refunds). Converted to dollars from ECU's using 1 ECU=$.89.

ACTIVE CASES

Country action taken against	Item	Type of case	Petitioner (date petition filed)	Comment	Status
European Community.	Canned peaches and pears and raisins.	301 (Production subsidies).	U.S. processed fruit industry (October 1981).	Panel report has been issued to disputants but is still confidential.	EC eventually delayed release of the initial report and convinced Panel to change some of its findings. U.S. requested another Panel meeting, which was held June 28. No action. New panel report is unavailable
European Community.	Pasta	301 (export subsidy).	U.S. National Pasta Association (October 1981).	GATT Panel report issued 4/83 ruling in U.S. favor. Report in front of subsidies code committee EC trying to prevent adoption. Further discussions in committee and US-EC bilateral working group on subsidies.	General discussion on the problems of the GATT Subsidies Code are taking place in the committee and in working group. The U.S. and the EC are still engaged in periodic informal bilateral consultations in an effort to reach an accommodation.
European Community.	Wheat flour	301 (export subsidy).	Miller's National Federation (December 1975).	Panel report issued March 1983. Subsidies Code Committee met to review panel findings. US is requesting the committee to answer questions that the panel failed to address, before the report is adopted.	Action has moved out of the Subsidies Code Committee to the U.S.-EC bilateral working group. General discussion about the problems if the Subsidies Code are taking place.
European Community.	Citrus	301 (tariff preferences).	Florida Citrus Commission, Calif-Ariz. Citrus League, Texas Citrus Mutual, Texas Citrus Exchange (January 1977).	Panel established Oct. 1983 and has held four meetings.	The Panel met (without disputants) on July 9; still promise to release the factual portion of its finding soon.
Brazil, European Community.	Poultry	301 (export subsidies).	National Broiler Council (September 1981).	....	Brazil originally objected to another round of trilateral consultations but later agreed to meet in such a forum. Three trilateral meetings have been held in Geneva. Little progress has been made so far during those meetings.
European Community.	Sugar	301 (export subsidies).	Great Western Sugar Co. (August 1981).	....	June 1982 President directed USTR to continue international efforts to reduce or eliminate EEC subsidies.

ACTIVE CASES—Continued

Country action taken against	Item	Type of case	Petitioner (date petition filed)	Comment	Status
Spain	Soybeans and other oilseeds.	301 (subsidies and imports).	National Soybean Processors Assoc. (NSPA) (April 1983) restrictions.	[1]	[1]
Portugal	do	do	do	[1]	[1]
Brazil	do	do	do	[1]	[1]
Brazil	Soybeans and other oilseeds and products.	301 (subsidies and import restrictions).	National Soybean Processors Assoc. (NSPA) (April 1983).	Brazil filed a countersuit on U.S. subsidies on soybean products (e.g. PL 480, blended credit and market development programs).	The USG and Brazil have both to respond to questions submitted by the other party, and are currently evaluating them.
Argentina	Sunflower oil and meal.	301 (export subsidies).	National Sunflower Association (NSA) (September 1983).	Petition withdrawn, Nov. 1983, (couldn't meet necessary deadlines).	Bilateral discussion on differential export tax issue held at the technical level in February and were discussed again at U.S.-Arg. Mixed Commission meeting in July. No action anticipated at this time. 16–17).

[1] First set bilateral discussions with Spain, Portugal, and Brazil, held in November 1983 (under Subsidies Code with Brazil, and under GATT Article XXII with Spain and Portugal). All countries agreed to provide the USG with additional information.

FOREIGN GOVERNMENT EXPORT ASSISTANCE

The attached tabulation gives a general indication of the nature and extent of foreign government assistance to exports of the principal commodities exported by the United States.

The most significant fact presented is the great variety of ways in which government can aid exports. Only some of these ways are inherently unfair trade practices. Not all practices are subsidies either under the rules of the General Agreement on Tariffs and Trade (GATT) or under U.S. countervailing duty legislation.

Direct payments to exporters are uncommon. The European Community is the primary example.

State trading in this tabulation refers to the communist countries. Their export pricing decisions are based on the need for foreign exchange and are unrelated to costs. The U.S. Department of Commerce recently determined that it is impossible to establish the existence of a subsidy involving such state trading.

Central marketing in this tabulation refers to marketing boards—government authorized and usually government financed and operated. The GATT requires such boards to operate on a commerical basis, but does not prevent a marketing board from charging different prices in different markets, "provided that such different prices are charged for commerical reasons, to meet conditions of supply and demand in export markets." For the most parts these boards do not subsidize exports directly. However, many of them are engaged in price support or price stabilization activities and eliminate most of the risks of export competition for the private sector.

For the most part this tabulation does not list price support programs and other domestic subsidies, although under U.S. law these are taken into account in countervailing cases. The tabulation does list certain domestic programs which affect exports and have been of particular problem for U.S. exporters.

In summary, the tabulation is not market share analysis, nor is it a precise measure of foreign subsidized competition. It does support the generalization that almost all U.S. agricultural exports face foreign government assisted competition to some degree. The figures provide a rough approximation of the extent of certain kinds of such competition.

U.S. EXPORTS OF SELECTED COMMODITIES AND THE EXTENT OF FOREIGN GOVERNMENT EXPORT ASSISTANCE IN WORLD TRADE, 1983

[Dollars in millions]

Commodity	1983 U.S. exports	Extent of Governmental Assistance to Exports (in percent)			
		Total [1]	Subsidies affecting exports [2]	Central marketing	State trading
Beet and veal, all types	$391.8	82	31	43	9
Pork, all types	183.5	80	22	13	44
Poultry meats	277.6	85	68		17
Eggs	56.2	97	93	5	
Lard	21.1	80	20		59
Tallow and grease	579.2	4	4		
Cattle hides	742.2				
Wheat and wheat flour	6,505.6	94	63	27	4
Rice	925.6	85	13		71
Coarse grains (barley, corn, oats, grain sorghum)	7,266.0	80	32	39	9
Cotton, except linters	1,817.0	69	12	4	56
Walnuts, in shell	34.6	74	74		
Almonds, shelled	243.2	42	42		
Apples, fresh	146.3	80	48	31	
Grapes, fresh	95.2	34	24	10	
Pears, fresh	25.4	65	41	24	
Raisins	105.5	78	10	68	
Prunes	71.4	89	24		66
Oranges and tangerines	235.1	84	43	37	4
Lemons	93.4	95	87	8	
Grapefruit	117.3	79	9	52	19
Soybeans	5,913.4				
Soybean oil	,423.9	62	62		
Soybean meal	1,527.1	71	71		
Tobacco, unmanufactured	1,461.7	36	17		19
Total above	29,259.3				
Other	6,838.8				
Grand total	36,098.1				

[1] Percentages are approximate based on most recent trade data available.

[2] Subsidies in most instances are cash payments on exports but in some they are tax rebates and/or preferential credit.

FOREIGN GOVERNMENT EXPORT ASSISTANCE

Commodity	U.S. exports	Balance of world exports [2]	Subsidies affecting exports [3]	Central marketing [4]	State trading [5]	Total government assistance
World exports of selected agricultural commodities, 1983 [1]:						
Beef and veal, all types (1,000 metric tons)	125	3,559	1,086	1,519	304	2,909
Percent			(31)	(43)	(9)	(82)
Pork, all types (1,000 metric tons)	99	1,210	286	160	536	964
Percent			(22)	(13)	(44)	(80)
Poultry meat (1,000 metric tons)	225	1,142	772		196	968
Percent			(68)		(17)	(85)
Eggs (million pieces)	1,030	9,452	8,791	489		9,280
Percent			(93)	(5)		(97)
Lard (1,000 metric tons)	43	243	51		144	195
Percent			(20)		(59)	(80)
Tallow and grease (1,000 metric tons)	1,447	1,806	78			78
Percent			(4)			(4)
Cowhides and skins, raw (1,000 metric tons)	603	990				
Percent					(6)	
Wheat and wheat flour (1,000 metric tons)	39,939	58,355	36,723	15,632	2,335	54,690
Percent			(63)	(27)	(4)	(94)
Rice (1,000 metric tons)	2,330	9,069	1,217		6,464	7,681
Percent			(13)		(71)	(85)
Coarse grains (1,000 metric tons)	53,984	37,526	12,148	14,781	3,266	30,195
Percent			(32)	(39)	(9)	(80)
Cotton, raw (1,000 bales 480 pound, set)	5,207	13,540	1,675	536	7,610	9,821
Percent			(12)	(4)	(56)	(69)
Tobacco, unmanufactured (1,000 metric tons)	240	1,100	185		211	396
Percent			(17)		(19)	(36)
Walnut, in shell (1,000 metric tons)	61	19	14			14
Percent			(74)			(74)
Almonds, shelled (1,000 metric tons)	59	46	42			42
Percent			(91)			(91)
Apples, fresh (1,000 metric tons)	273	1,075	521	336		857
Percent			(48)	(31)		(80)
Pears, fresh (1,000 metric tons)	36	229	93	55		148
Percent			(41)	(24)		(65)
Grapes, fresh (1,000 metric tons)	111	410	98	41		139
Percent			(24)	(10)		(34)
Raisins (1,000 metric tons)	52	234	24	159		183
Percent			(10)	(68)		(78)
Prunes (1,000 metric tons)	53	38	9		25	34
Percent			(24)		(66)	(89)
Oranges and tangerines (1,000 metric tons)	478	3,855	1,671	1,422	160	3,253
Percent			(43)	(37)	(4)	(84)
Grapefruit (1,000 metric tons)	308	455	39	237	85	361
Percent			(9)	(52)	(19)	(79)
Lemons (1,000 metric tons)	147	708	619	55		674
Percent			(87)	(8)		(95)
Soybeans (1,000 metric tons)	20,684	4,792				
Percent						(0)
Soybean oil (1,000 metric tons)	918	2,843	1,770			1,770
Percent			(62)			(62)
Soybean meal (1,000 metric tons)	4,853	13,477	9,550			9,550
Percent			(71)			(71)

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[1] Individual commodity data are for calendar year 1983 or market year 1982–83. Cattle hides and tallow are for 1982.

[2] Intra-European Community trade is excluded.

[3] Numbers in parentheses represent the percentage of foreign exports receiving government assistance.

[4] Commodity marketing boards—national and/or provincial.

[5] State trading in nonmarket economics.

BEEF AND VEAL: [1] EXPORTS IN 1983

[In thousands of metric tons]

Country	Exports	Type of government assistance
European Community [2]	426	Cast payment.
Australia	728	Meat Board.
New Zealand	371	Meat Board.
Eastern Europe	304	State trading.
Argentina	420	Meat Board.
Brazil	450	Tax rebate.
Uruguay	210	Rebate of indirect taxes.
Others	650	
Total above	3,559	
United States	125	

[1] Carcass weight equivalent basis, excludes fat, offals, and live animals.
[2] Intra-European Community trade of 1,262,000 metric tons excluded.

PORK: [1] EXPORTS IN 1983

[In thousands of metric tons]

Country	Exports	Type of government assistance
European Community [2]	268	Cash payment.
Eastern Europe [3]	536	State trading.
Canada	160	Provincial marketing boards.
Others	246	
Total above	1,210	
United States	99	

[1] Carcass weight equivalent basis, excludes fat, offals, and live animals.
[2] Excludes intra-European Community trade of 1,803,000 metric tons.
[3] Consists of German Democratic Republic, Poland, Romania, and Hungary.

POULTRY MEAT: EXPORTS IN 1983

[In thousands of metric tons]

Country	Exports	Type of government assistance
European Community [1]	483	Cash payments to producers/exporters.
Brazil	289	Favorable production financing. Rebate of taxes, export credit.
Hungary	196	State trading.
Other countries	174	
Total above	1,142	
United States	225	

[1] Excludes intra-European Community trade of 363,000 metric tons.

EGGS: EXPORTS IN 1983

[Amounts in million pieces]

Country	Exports	Type of government assistance
European Community [1]	5,533	Cash payment (export restitution).
Eastern Europe	2,313	State trading, pricing to obtain hard currency.
Finland	547	Cash payment (export restitution).

EGGS: EXPORTS IN 1983—Continued

[Amounts in million pieces]

Country	Exports	Type of government assistance
Spain	398	Cash payment (export restitution).
Australia	199	Egg Board.
Canada	290	Eggs Marketing Board.
Others	172	
Total above	9,452	
United States	1,030	

[1] Excludes intra-European Community trade.

LARD: EXPORTS IN 1982/83 (OCTOBER-SEPTEMBER)

[In thousands of metric tons]

Country	Exports	Type of government assistance
European Community [1]	[2] 48	Cash payment.[3]
U.S.S.R.	73	State trading.
Hungary	37	State trading.
Romania	15	State trading.
Bulgaria	19	State trading.
Argentina	3	Tax rebate.
Others	48	
Total above	243	
United States	43	

[1] Excludes intra-European Community trade.

[2] 1983.

[3] Lard exports can be subsidized but European Community is not presently offering any export subsidies for lard.

TALLOW: EXPORTS IN 1982-83 (OCTOBER-SEPTEMBER)

[In thousands of metric tons]

Country	Exports	Type of government assistance
European Community [1]	[2] 50	
Australia	201	
Canada	178	
New Zealand	101	
Argentina	78	Tax rebate.
Others	1,156	
Total above	1,806	
United States	1,447	

[1] Excludes intra-European Community trade (estimated at 75 percent).

[2] 1983.

Source: "Oil World," May 6, 1983.

CATTLEHIDES: EXPORTS IN 1982

[In thousands of metric tons]

Country	Exports	Type of government assistance
European Community [1]	63	
Australia	125	
New Zealand	23	
Canada	91	
Switzerland	14	
Sweden	16	

CATTLEHIDES: EXPORTS IN 1982—Continued

[In thousands of metric tons]

Country	Exports	Type of government assistance
South Africa	14	
Argentina	36	
Others	608	
Total above	990	
United States	603	

[1] Excludes intra-European Community trade (estimated at 95 percent).

Source: "FAO Trade Yearbook," 1983.

WHEAT AND WHEAT FLOUR: EXPORTS IN 1982/83 (JULY-JUNE)

[In thousands of metric tons]

Country	Exports	Type of government assistance
Canada	21,223	Wheat Board, subsidized rail rates.
European Community [1]	15,500	Cash payment (export restitution).
Australia	8,131	Wheat Board
Argentina	7,501	Grain Board.
Eastern Europe	2,335	State trading.
Others	3,665	
Total above	58,355	
United States	39,939	

[1] Excludes intra-European Community trade.

COARSE GRAINS: EXPORTS IN 1982-83 (OCTOBER-SEPTEMBER)

[In thousands of metric tons]

Country	Exports	Type of government assistance
Argentina	11,561	Grain Board.
Canada	7,048	Marketing Board (barley, oats), export credit guarantees (barley), donations (corn), subsidized rail rates.
European Community [1]	5,100	Cash payment.
Eastern Europe	3,266	State trading.
Thailand	2,423	Government controlled.
South Africa	2,300	Marketing Board.
Australia	920	Marketing Board.
Others	4,908	
Total above	37,526	
United States	53,984	

[1] Excludes intra-European Community trade.

COTTON: EXPORTS IN 1982-83

[1,000 bales of 480 lb net]

Country	Exports	Type of export assistance
U.S.S.R.	3,300	State trading.
Pakistan	1,273	State trading.
Turkey	654	State control cash rebate.

COTTON: EXPORTS IN 1982–83—Continued

[1,000 bales of 480 lb net]

Country	Exports	Type of export assistance
Egypt	920	State trading.
Mexico	410	State and private trading.
Sudan	640	State trading.
Paraguay	335	
Guatemala	195	Central co-op marketing.
Nicaragua	341	Central co-op marketing.
Argentina	113	
Brazil	1,021	Differential taxes.
Syria	510	State trading.
Australia	617	
India	557	State trading.
Others	2,654	
Total above	13,540	
United States	5,207	

TOBACCO, UNMANUFACTURED: EXPORTS IN 1983

[In thousands of metric tons]

Country	Exports	Type of government assistance
European Community	[1] 1	Cash payment.
Canada [2]	44	
Brazil	160	Preferential financing.
Argentina [3]	24	Direct production subsidy.
Zimbabwe	105	
India	75	
South Korea	27	State trading
Philippines	29	
Turkey	100	State trading.
Dominican Republic	24	
Malawi	60	
Thailand	46	
Bulgaria	58	State trading.
Yugoslavia	26	State trading.
Others	221	
Total above	1,000	
United States	240	

[1] Excludes intra-European Community trade.

[2] Province of Ontario has announced it will fund up to 2 cent per pound export payment for the 1984 crop, if necessary. Total cost of export payment would not exceed $1,600,000.

[3] Argentina provides a production subsidy paid from a fund generated by a special cigarette tax. This subsidy reduces the price of leaf to export dealers and allows Argentina leaf to compete in world markets.

WALNUTS (IN SHELL BASIS): EXPORTS IN 1982–83

[In thousands of metric tons]

Country	Exports	Type of government assistance
European Community [1]	2.4	Cash payments.
India	11.8	Cash payments.
Turkey	5.0	
Total above	19.2	
United States	61.1	

[1] Excludes intra-European Community trade.

ALMONDS, SHELLED: EXPORTS IN 1982-83

[In thousands of metric tons]

Country	Exports	Type of government assistance
Italy	[1] 0.2	Cash payment.
Portugal	2.9	
Spain	42.0	Tax refunds, preferential credit.
Turkey	.5	
Total above	45.6	
United States	58.9	

[1] 2.2 intra-European Community trade excluded.

APPLES, FRESH: EXPORTS IN 1982-83

[In thousands of metric tons]

Country	Exports	Type of government assistance
Canada	64	Marketing Board.
European Community	[1] 301	Cash payment.
New Zealand	93	Marketing Board.
Australia	35	Marketing Board.
Argentina	220	([2]).
Chile	180	
South Africa	144	Marketing Board.
Others	38	
Total above	1,075	
United States	273	

[1] Excludes intra-European Community trade.

[2] Argentina reimburses certain taxes on concentrated apple juice shipped from Patagonia ports; it taxes fresh apple exports.

PEARS, FRESH: EXPORTS IN 1982-83

[In thousands of metric tons]

Country	Exports	Type of government assistance
European Community	[1] 23	Cash payment.
Argentina	70	Tax reimbursement.
Chile	21	
South Africa	55	Marketing Board.
Others	60	
Total above	229	
United States	36	

[1] Excludes intra-European Community trade.

GRAPES, FRESH: EXPORTS IN 1983

[In thousands of metric tons]

Country	Exports	Type of government assistance
European Community	[1] 98	Cash payment
Chile	152	
South Africa	41	Fruit Board.
Others	119	
Total above	410	
United States	111	

[1] Excludes intra-European Community trade.

RAISINS AND SULTANEAS: EXPORTS IN 1982–83

[In thousands of metric tons]

Country	Exports	Type of government assistance
European Community	[1] 24.3	Cash payment.
Turkey	83.0	State control
Australia	57.9	Marketing Board.
Iran	40.3	
South Africa	18.3	Marketing Board.
Mexico	5.5	
Others	5.1	
Total above	234.4	
United States	51.7	

[1] Excludes intra-European Community trade.

PRUNES: EXPORTS IN 1982–83

[In thousands of metric tons]

Country	Exports	Type of government assistance
Yugoslavia	[1] 25.1	State trading (cash payment).
Argentina	4.8	Post-export financing.
Chile	2.9	
France	4.6	Eligible for export restitution.[2]
Others	.2	
Total above	37.6	
United States	52.8	

[1] Excludes intra-European Community trade of estimated 4,400 metric tons.

[2] Although prunes are eligible for export restitution payments, no subsidy data are available, so it is not certain whether any payments have been made.

ORANGES AND TANGERINES: EXPORTS IN 1982–83

[In thousands of metric tons]

Country	Exports	Type of government assistance
Spain	1,472	Internal tax rebates, preferential credit.
Morocco	597	Government control.
Turkey	91	Exchange control—low cost loans.
Lebanon	97	
Israel	508	Citrus Board.
European Community	[1] 4	Cash payment.
Egypt	181	Government control
Cyprus	101	
Mexico	15	
Brazil	66	(2).
Argentina	38	(3).
Uruguay	23	
South Africa	317	Citrus Board.
Australia	30	
Cuba	160	State trading.
Others	155	
Total above	3,855	
United States	478	

[1] Excludes intra-European Community trade.

[2] Brazilian tax exemption assists exports of concentrated orange juice.

[3] Argentina reimburses certain taxes on grapefruit juice exports and levies export taxes on fresh grapefruit.

GRAPEFRUIT: EXPORTS IN 1982–83

[In thousands of metric tons]

Country	Exports	Type of government assistance
Cyprus	67	
Israel	177	Citrus Board.
Lebanon	6	
Spain	5	Tax rebate, preferential credit.
Turkey	11	Exchange control, low cost loans, tax rebate.
Argentina	23	([1]).
South Africa	60	Citrus Board.
Cuba	85	State trading.
Others	21	
Total above	455	
United States	308	

[1] Argentina reimburses certain taxes on grapefruit juice exports and levies an export tax on fresh grapefruit.

SOYBEANS: EXPORTS IN 1983–84

[In thousands of metric tons]

Country	Exports	Type of government assistance
Brazil	1,300	([1])
Argentina	2,600	
Paraguay	430	
European Community	[2] 11	
Others	451	
Total above	4,792	
United States	20,684	

[1] Brazil offered preferential financing for drawback operations, which was suspended in 1983–84.

[2] Excludes intra-European Community trade.

SOYBEAN OIL: EXPORTS IN 1983–84

[In thousands of metric tons]

Country	Exports	Type of government assistance
Brazil	875	Tax rebates, preferential credit differential export taxes.
Argentina	380	Tax rebates, preferential credit differential export taxes.
European Community	916	
Spain	435	State trading consumption quota, export tax rebate.
Portugal	80	Export tax rebate.
Others	98	
Total above	2,784	
United States	748	

SOYBEAN MEAL: EXPORTS IN 1983-84

[in thousands of metric tons]

Country	Exports	Type of government assistance
Brazil	7,600	Tax rebates, preferential credit differential export taxes.
Argentina	1,950	Tax rebates, preferential credit differential export taxes.
European Community	[1] 2,249	
Others	1,678	
Total above	13,477	
United States	4,853	

[1] Excludes intra-European Community trade.

RICE: EXPORTS IN 1983

[In thousands of metric tons]

Country	Exports	Type of government assistance
Thailand	3,700	State trading (1/3 of total).
India	165	State trading.
Pakistan	1,299	State trading.
Japan	321	State trading, domestic support program.
European Community	365	Cash payment.
Burma	750	State trading.
People's Republic of China	550	State trading.
Taiwan	531	Sales at less than acquisition cost.
Others	1,388	
Total above	9,069	
United States	2,330	

[1] Excludes intra-European Community trade.

LEMONS: EXPORTS IN 1982-83

[In thousands of metric tons]

Country	Exports	Type of government assistance
European Community	[1] 113	Cash payment.
Cyprus	35	Cash payment.
Israel	30	Citrus Board, onetime cash payment.
Lebanon	17	
Spain	315	Tax rebate, preferential credit.
Turkey	135	Exchange control, low cost loans, tax rebate.
Argentina	21	Tax reimbursement.
Chile	3	
Uruguay	5	
South Africa	25	Citrus Board.
Others	9	
Total above	708	
United States	147	

[1] Excludes intra-European Community trade.

GLOSSARY OF AGRICULTURAL EXPORT TERMS*

(Compiled by the Food and Agriculture Section, Environment and Natural Resources Policy Division, Congressional Research Service, Library of Congress)

Abandonment.—An insurance term indicating that damage suffered by a vessel is severe enough to constitute total loss. The term also refers to the refusal of a consignee to accept delivery of freight so badly damaged in transit that it is worthless.

Admiralty.—Refers to maritime law, both civil and criminal.

Agency fee.—A charge by the ship's agent or owner for services while the ship is in port.

Alongside.—The side of the vessel. Goods to be delivered alongside are to be delivered to the dock or lighter from which they can be loaded aboard the ship.

Balance of payments.—An accounting statement measuring the value of goods, services, gold, and capital exchanged between a country and all foreign countries. A nation is said to have either: (1) a balance of payments deficit if it sends abroad more than it receives from foreigners; or (2) a balance of payments surplus if it receives more than it sends abroad.

Balance of trade.—The difference in value between a country's merchandise imports and exports in a specified period. A country's balance of trade is only one factor—though an important one—in its balance of payments.

Bale cargo.—Goods wrapped in burlap or similar material for waterborne transportation.

Barter.—The exchange of goods and services without the use of money. When one or more governments is party to a barter exchange the term "public barter" is used. In international trade barter is referred to as "countertrade." Barter is an especially popular form of trade among countries that are short of foreign exchange needed to pay for food and other necessary imports. The U.S. Government ran a barter program from 1950 to 1973, exchanging surplus agricultural commodities for strategic materials and for goods and services it otherwise would have purchased. In addition, barter agreements between the United States and Jamaica were signed in 1982 and 1983.

Base period price.—The average price for an item in a specified time period used as a base for an index—such as 1910-14, 1957-59, 1967, 1977. Time series of data are often deflated to a base period price. Such deflated time series are referred to as constant dollar values (versus nominal dollar values).

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*Many of the terms were compiled from three U.S. Department of Agriculture (USDA) publications: "The Fact Book of Agriculture," revised November 1979, "The Dictionary of International Agricultural Trade," April 1971 and "Fact File: Glossary of Ocean Transportation Terms," Foreign Agriculture, August 1984.

Berth.—The place beside a pier, quay, or wharf where a vessel can be loaded or discharged. If a vessel is chartered for loading "on berth," the contract of affreightment is called "berth charter."

Bilateral.—Two-party or two-country, as in a bilateral trade agreement. Bilateral trade agreements usually set minimum and maximum trade volumes and sometimes prices for one or more commodities. The agreements are viewed by some as noncompetitive because they tend to exclude other countries from trading such commodities with the two nations bounded by the agreement.

Bill of lading.—A document signed by the vessel master or other authorized person on behalf of the carrier, furnishing written evidence for the conveyance and delivery of merchandise to a specified destination. It is both a receipt of goods and a contract to deliver them.

Blended credit.—A Federal export promotion program operated by the Foreign Agricultural Service [FAS] of the USDA. Federally guaranteed commercial loans at market interest rates (GSM-102) are combined (blended) with direct credit (GSM-5) from the Government at zero interest. This subsidized credit is made available to selected countries for a limited number of agricultural commodities.

Bottom.—Usually synonomous with "vessel" or "ship." A ship of American registry may be referred to as a "U.S. bottom," whereas if registry is other than United States, the ship, in U.S. usage, may be called a "foreign bottom."

Bulk cargo.—A shipment such as oil, grain or ore which is not packaged, baled, bottled or otherwise packed and which is loaded without counting or marking.

Bulk carrier.—Refers to two types of cargo ships: the dry-bulk carrier and the liquid-bulk carrier, better known as a tanker.

Carryover.—The supply or volume of a farm commodity not yet used at the end of a marketing year. It is the remaining stock carried over into the next year. Marketing years generally start at the beginning of the new harvest for a commodity and extend to the same time in the following year.

Cartel.—An alliance or arrangement among industrial or commercial enterprises or nations aimed at obtaining a monopoly of the market.

CIF—Cost, insurance, freight. In general, CIF means that the seller's price includes the cost of the goods, the marine insurance, and all transportation charges to the named point of destination. Similar terms include C&F, cost and freight; CFI, cost, freight, and insurance; CIF&C, cost, insurance, freight, and commission; CIFC&I, cost, insurance, freight, commission, and interest; and CIFI&E, cost, insurance, freight, interest, and exchange. CAF is the French form of CIF.

Coasting trade.—Trade between ports of the same country as contrasted with trade between foreign ports. It is sometimes referred to as cabotage.

Commercial invoice.—Record of the transaction between a buyer and seller.

Commodity Credit Corporation (CCC).—A wholly owned Federal corporation within, and managed by officials of, the Department of Agriculture. It functions as the financial institution through which all money transactions are handled for farm price and income support. The CCC has the authority to borrow up to $25 billion from the U.S. Treasury to carry out its obligations. Net losses on financial operations are restored through congressional appropriation.

Common agricultural policy (CAP).—The set of written legislation and unwritten practices jointy adopted by the nations of the European Community (EC) in order to provide a common policy farmework for agriculture. Its stated purpose is to increase farm productivity, stabilize markets, ensure a fair standard of living for farmers, guarantee regular supplies, and ensure reasonable prices for consumers. The CAP rests upon four basic principles: Common import restrictions, common financing, common pricing, and common treatment of surpluses.

Common external tariff (CXT).—A tariff rate applied by a regional grouping of countries as a unit. For example, the European Community allows free trade in most agricultural commodities among member countries, but applies common external tariffs against many farm products imported from nonmember or third countries.

Comparative advantage.—Refers to the theory that in international trade it is more advantageous for a country to devote its resources not to all lines of production in which it may have superiority, but to those in which its superiority is greatest. The theory was first stated clearly by David Ricardo in 1817, who advanced the proposition that for any country the cost of producing additional units of one product is seen in terms of the necessary reduction in the output of another product.

Complementary imports.—Agricultural import items not produced in appreciable commercial volume in the United States. Examples: Bananas, coffee, rubber, cocoa, tea, spices, and cordage fiber. See Supplementary Imports.

Consessional sale.—A sale in which the buyer is allowed payment terms that are more favorable than those obtainable in the open market. Under Public Law 480, the concession may be the length of the credit period, the grace period for repayment, or the interest rate charged. See Public Law 480.

Conference.—Conferences operate in most of the world's trade routes. The basic objectives of conferences are to reach agreement among members with respect to transportation rates and other conditions for carrying goods or passengers, and to strengthen the members' lines through cooperative action. A steamship conference is a voluntary association of steamship lines that make scheduled sailings over a trade route.

Consignee.—The person or firm to whom goods are consigned as stated on the contract of affreightment.

Consignor.—The person named in a contract affreightment as the one from whom the goods have been received for shipment.

Consular fee.—Charged by a consular agent in an exporting country for certifying that an invoice for merchandise is correct. Consular fees also may be charged for other services, such as visas.

Consular invoice.—Covers a shipment of export goods certified by a consular official of the country of destination.

Consumer Price Index (CPI).—General measure of retail prices (goods and services) usually bought by urban wage earners and clerical workers. Includes prices of about 400 items, including food, clothing, housing, medical care, and transportation. The CPI is commonly used to deflate time series data.

Containerization.—A method of shipping merchandise. In the broadest sense, containerization is the use of a box in which to ship merchandise. The box may be with or without wheels, with or without refrigeration equipment, ventilated or unventilated, and manufactured in varying sizes. Containers reach seaport by motortruck, rail, or barge. (Sometimes, the barge itself is a floating container.) At the seaport, the containers are put aboard ship, usually with handling equipment. A ship specially constructed to handle containers is referred to as a container ship.

Containerization has given rise to a number of special terms. Box is longshoreman's jargon for container, and the work of filling containers is known as stuffing boxes. Intermodal transport refers to the capability of container units to be handled efficiently by various carriers. For example, because containers in one type of system have common handling characteristrics and have the same size, they may be transferred readily from highway motortruck to railroad to ocean carrier, in a complete origin-to-destination movement. "LASH," an abbreviation of "lighter aboard ship" refers to a system of carrying cargo aboard ships in floating containers or lighters. Roll-on-roll-off or or-ro refers to ships which permit containers to be driven on or off without use of special cranes.

Contraband.—Goods smuggled into a country to avoid payment of customs duty.

Contract of affreightment.—A contract with a shipowner to hire the ship, or part of it, to carry goods. The contract generally takes the form of a charter party or bill of lading.

Contract sanctity.—The concept the U.S. agricultural exports under contract should not be subject to Government cancellation because of short supply, national security, and/or foreign policy reasons. The Commodity Futures Trading Act of 1982 (Public Law 97-444) provides for contract sanctity by prohibiting the President from restricting for a period of 270 days, the export of any agricultural commodity under contract when an embargo is imposed, except during national emergency or war.

Cooperator program.—One of several agricultural export promotion programs operated by the Foreign Agricultural Service of the USDA. This program consists of joint Government/agri-industry efforts to develop markets by acquainting potential foreign customers with U.S. farm products. Activities under this program include providing technical assistance to prospective foreign buyers, overseas food exhibits, product demonstrations, and advertising aimed at foreign consumers. FAS shares the financing of these projects with the cooperatives, who are nonprofit commodity trade associations primarily composed of producer-based farm groups.

Cost of production.—The average unit cost of producing an agricultural commodity. Public Law 93-86, the Agricultural and Consumer Protection Act of 1973, requires the Department of Agriculture to make annual estimates of the average costs (per unit of commodity) involved in producing selected commodities. These cost of production estimates have been used by Congress in setting target price and other income support levels.

Countervailing duty.—A charge levied on an imported article to offset the unfair price advantage it holds due to a subsidy paid by the exporting country on its production or export. Section 303 of the U.S. Tariff Act of 1930, as amended, provides for an assessment equal to the amount of the subsidy in addition to other duties and fees normally paid on the imported article.

Debt-asset ratio.—This financial ratio measures the percentage of total funds that lenders have provided agricultural producers relative to the assets these producers hold. It also serves to measure the financial leverage of the farm sector as well as individual producers' leverage. The debt-to-asset ratio varies widely among producers depending on the level of debt each carries.

Deferred rebate.—The return of a portion of the freight charges by a carrier or a conference to shippers in exchange for giving all or most of their shipments to the carrier or conference over a specified period, usually 6 months. The deferred rebate system is illegal in U.S. foreign commerce, but it is generally accepted and used in ocean trade between foreign countries.

Deficiency payments.—Direct payments to farmers made when farm prices are below target levels; arrived at by subtracting from the target price, the higher of (1) the loan rate, or (2) the national average price of a commodity during the first 5 months of the marketing year (calendar year for cotton). Generally, the Government pays this difference to a farmer who qualifies (by meeting all farm program conditions) for that portion of his production specified in the farm program.

Demurrage.—The detention of a vessel beyond the time allowed in the vessel's charter party for loading, unloading, or sailing. Also refers to the allowance or payment made to the master or owner of the ship for such detention.

Direct credit.—A Federal export promotion program (designated as GSM-5) operated by the Foreign Agriculture Service of the USDA. Loans are made directly by the Government at varying interest rates to foreign buyers of agricultural commodities. Loan funds are provided by the Commodity Credit Corporation. Prior to fiscal year 1980, Government credit for agricultural exports was made available through the GSM-5 program. For austerity reasons, the program was replaced by federally guaranteed commerical credit in 1980. A more limited direct credit program was reinstituted in 1982. See blended credit, guaranteed credit.

Disaster payments.—Direct Federal payments that are made to producers of selected crops in the event of serious production loss due to national disaster. Under the Agriculture and Food Act of 1981, a greatly expanded program of Federal Crop Insurance has largely replaced disaster payments, which are now available only by designation of the Secretary of Agriculture under special and limited circumstances.

Discharge.—To unload the cargo of a ship.

Diversion payments.—Payments made to farmers who voluntarily reduce their planted acreage of a program crop and devote the land to a conservation use when a paid acreage diversion is in effect. Also, payments made to dairy producers who agree to reduce their milk marketings below a prescribed level. See paid acreage diversion.

Documentary instructions.—Description and enumeration of shipping documents which the buyer requires from seller.

Domestic international sales corporation [DISC].—As an export incentive, the Internal Revenue Code provides a significant tax benefit to firms that export. Federal tax liability on the export income of a specially defined subsidiary, known as a domestic international sales corporation, or a DISC, is deferred until the income is distributed to the parent company.

Dumping.—Selling commodities in a foreign market at a lower price than in the domestic market. Under the rules of the General Agreement on Tariffs and Trade [GATT] dumping occurs when the price to the importer is less than the normal price of the product charged to the buyer in the country of origin. When considering the imposition of antidumping duties, the U.S. Government examines the imported price of a product compared to its domestic price. In addition, before duties are imposed proof of injury to a U.S. industry must be demonstrated.

Duty (import).—A customs duty is a charge assessed by a government on an imported item at its point of entry into the country, and paid for by the importer; the term is used interchangeably with tariff. In terms of assessing duties there are two basic types: An "ad valorem" duty is assessed in proportion to the value of the imported item, whereas a "specific" duty is assessed on the basis of a measure other than value, such as the quantity of the product imported. In addition, a "compound" or "mixed" duty, which is a combination of an ad valorem and specific duty, is occassionally used in the Tariff Schedules of the United States. Special duties such as antidumping duties or countervailing duties may also be levied on imports to offset the unfair price advantage of an imported article which is dumped or subsidized by an exporting country.

Ex (point of origin).—The point at which the price is quoted, such as Ex factory, Ex mill, or Ex warehouse.

Ex dock (point of importation).—The price quoted includes all additional costs necessary to place the goods on the dock at the named point of importation, duty paid, if any.

Export Administration Act.—This act provides legal authority to the President to control U.S. exports for reasons of national security, foreign policy, and/or short supply.

Export allocations or quotas.—Controls applied to exports by an exporting country to limit the amount of goods leaving that country. Such controls usually are applied in time of war or during some other emergency requiring conservation of domestic supplies, as well as to advance foreign policy and national security objectives of the exporting country.

Export controls.—The U.S. Government controls exports of U.S. farm products and other goods under the Export Administration Act. Export licenses are issued by the Office of Export Administration, U.S. Department of Commerce. The Commerce Department uses "general" and "validated" licenses. The bulk of U.S. farm products move to both non-Communist and Communist countries under general license, which is a general authorization printed in the Commerce Department's export control regulations. Shippers exporting under a general license are required only to note the appropriate general license symbol on the shipper's export declaration. But to export under a validated license, the shipper must make formal application to the Commerce Department and supply information as to goods being shipped, destination, value, et cetera.

Export credit revolving fund.—The Agriculture and Food Act of 1981 (Public Law 97-98) authorized a revolving loan fund that would provide short-term and intermediate-term direct credit for export sales of agricultural commodities, breeding animals, and handling facilities in developing markets. Once capitalized, loans would be made from the initial fund and repayments of principal and interest would return to the fund to be revolved as new loans. Money has not been appropriated to capitalize the revolving fund so it remains authorized but nonfunctional.

Export incentive programs.—A Federal export promotion effort operated by the Foreign Agricultural Service of the USDA. Assistance is provided to private firms to help them promote brand name food items in overseas markets.

Export promotion programs.—Activities carried out by the Foreign Agriculture Service of the USDA to encourage the export of U.S. agricultural commodities. Included among the commonly listed activities are: commercial credit, concessional credit, information and exhibit assistance, market intelligence, data services, and technical assistance.

Export subsidy.—A government grant of one kind or another made to a private enterprise for the purpose of facilitating exports in the public good. "Subsidy" has an invidious connotation, therefore some other term, such as "payment," "differential," "assistance" or "aid" is often used. In Europe, the term "restitution" is commonly used.

F.A.S.—Free alongside steamer.—Used in sales price quotations indicating that the price includes all costs of transportation and delivery of the goods to the dock. The buyer is then responsible for having the goods loaded onboard and paying the cost of shipping from that point on.

Family farm.—A farm where the operator and his family make most of the management decisions, supply the equity capital, and provide a significant part of the labor needs.

Farm.—Since 1976, a farm is defined by the Bureau of the Census as any place that has $1,000 or more gross sales of farm products. Formerly, the definition of a farm was based on a combination of the "acres in the place" and the "value of farm products sold." "Place" included all land on which agricultural operations were conducted under the control of one person, partnership, or corporation. Places of 10 or more acres were counted as farms if estimated sales of agricultural products were at least $50. Places of less than 10 acres were counted as farms if sales of agricultural products for the year were at least $250.

Farm equity.—The net worth of the farm sector's assets (that is, farmland, machinery, equipment, facilities, crop, and livestock inventories) against which there is no debt. This represents all farm proprietors' residual claims to farm assets. Increases in farm equity in the late 1970's became increasingly important for most agricultural producers as a source of additional collateral against which to obtain credit for operating and expansion purposes. The level of farm equity ranges widely from one farm to another and reflects the extent to which an individual producer has borrowed.

Farm to retail price spread.—The difference between the farm value and the retail price of food, reflecting charges for processing, shipping, and retailing farm goods. The current spread accounts for about two-thirds of the retail price for a market basket of goods, according to USDA.

Farmer-owned grain reserve [FOR].—This program was established under the food and Agriculture Act of 1977 and is designed to buffer sharp price movements and to provide reserves against production shortfalls by allowing wheat and feed grain farmers to participate in a Government-financed grain storage program. Farmers who place their grain in storage receive an extended nonrecourse loan for at least 3 years. In addition, interest on the loan may be waived and farmers may receive annual storage payments from the Government. The farmer cannot take his grain out of storage until the market price reaches a specific "trigger price." Once this is reached, the farmer may elect to remove his grain from the reserve but is not required to do so. The farmer-owned grain reserve isolates grain from the market when prices are low, thereby tending to reduce supply and force prices up. Rising prices are tempered when grain is removed from the reserve.

Fee [import].—A fee is a charge assessed for a service rendered. For example, when an import stamp or license is issued the Government assesses a fee for this service. Within the context of section 22 of the Agricultural Adjustment Act of 1933, "fees" may be assessed under certain circumstances on imports of agricultural products. Commodities currently subject to section 22 fees or quotas include dairy products, peanuts, cotton, cotton products, sugar and syrups. See section 22.

Floating elevator.—Machinery erected on a floating structure. Generally used for transferring grain from barges to the holds of ships or vice versa. The expression indicates that the seller assumes all responsibilities and costs up to the specific point or stage of delivery named including transportation, packing, insuring, et cetera. A wide variety of f.o.b. terms are used, such as f.o.b. factor Detroit, f.o.b. cars New York, f.o.b. ship Norfolk, et cetera. "Free on board vessel," under most Public Law 480 grain contracts, means delivery at the discharge end of the loading spout.

Food-for-Peace Program.—See Public Law 480.

Food grain.—Cereal seeds most commonly used for human food, chiefly wheat and rice.

Food power.—The act of withholding or making available agricultural commodities for export or aid by an exporting nation or group of nations for the purpose of influencing the actions of another country or group of countries. Food power implies a foreign policy motivation rather than a financial motivation to exports.

Food security wheat reserve.—Title III of the Agriculture Act of 1980 (Public Law 96-494) established a reserve of up to 4 million metric tons of wheat for use in meeting emergency food needs in developing countries. This reserve is to be used to meet famine or other urgent or extraordinary relief requirements during periods of tight supplies and high prices when commodities are not available under the provisions of Public Law 480. One exception is that up to 300,000 metric tons annually can be made immediately available to meet an urgent requirement in a country hit by a major disaster. The limitations placed on the use of the reserve are designed to isolate it from the domestic market so as not to depress grain prices.

GATT—General Agreement on Tariffs and Trade.—A multilateral treaty signed by over 90 countries that establishes a framework for the expansion of international trade through a process of negotiation. This process is conducted with the view to eliminate discriminatory treatment in international commerce including a reduction in tariff and nontariff trade barriers. The treaty contains a number of codes of conduct for member governments. An example of this is the subsidies code which defines what subsidies are allowed. It also establishes a formal complaint framework for members to protest and seek compensation for violations of the trade codes as well as a framework for periodic multilateral negotiations on trade liberalization and expansion. Seven of these sessions have been held to date: the most recent of these rounds, the Tokyo Round of Multilateral Trade Negotiations [MTN], began in 1973 and ended early in 1979.

General cargo.—Miscellaneous goods carried in units or small guantities which vary in weight, size, condition, nature and class.

Generalized system of preferences [GSP].—First authorized by the Trade Act of 1974, GSP allows 140 developing countries to ship approximately 3,000 products to the United States duty free. This helps developing countries to generate foreign exchange needed to purchase import commodities. The United States and 18 other industrialized nations began GSP programs in the mid 1970's to promote the economic growth of developing nations.

Guaranteed export credit.—A Federal export promotion program (designated GSM-102) operated by the Foreign Agricultural Service of the USDA. Loans made by commercial lenders at market interest rates to foreign buyers of agricultural commodities are guaranteed by the Commodity Credit Corporation [CCC]. The CCC guarantees repayment of 98 percent of the principal and up to 8 percent of the interest. Only in the case of default, that is when a foreign buyer does not repay the commercial lender, is there an outlay, or loss, to the Government account.

High value products [HVP].—Agricultural products that are inherently high in value. They may or may not be processed. HVP's can be divided into three groups: (1) Semiprocessed products, such as fresh and frozen meats, flour, vegetable oils, roasted coffee, refined sugar; (2) highly processed products that are ready for the consumer, such as milk, cheese, wine, breakfast cereals; and (3) high-value unprocessed products that are also often consumer-ready, such as fresh and dried fruits and vegetables, eggs, and nuts.

Intermodalism.—Refers to the capability of container units to be handled efficiently by various carriers.

International commodity agreement.—An undertaking by a group of countries to exchange information, stabilize trade, supplies, and in some cases, prices of a commodity for the benefit of participating countries.

International trade barriers.—Regulations used by governments to restrict imports from and exports to other countries. Examples include duties, tariffs, embargoes, quotas, and unnecessary sanitary restrictions.

Levy.—The U.S. Department of Agriculture defines levy as an import charge assessed by a country or group of countries not in accordance with a definite tariff schedule. The "variable import levy" of the European Community is an example. The EC's levy on grains can vary from day to day, depending on the offering price of third-country suppliers. In the USDA's view, the variable import levy is a nontariff trade barrier because, unlike a modernate customs duty or even a quota, it can completely bar imports.

Lighter.—A small ship or barge used to load or unload cargo from larger vessels.

Lighter aboard ship (LASH).—Refers to a system of carrying cargo aboard ships in floating containers or lighters.

Lighterage.—The rate of charges, or total charges, for lighter services.

Liner.—A vessel that operates in a freight service market as a common (public) carrier. It operates on a regular route and schedule. Some liners carry freight only; some a varying proportion of freight and passengers; some only passengers.

Loan rate.—The price per unit (bushel, bale, pound) at which the Government will provide loans to farmers to enable them to hold their crops for later sale. See nonrecourse loans.

Marketing orders and agreements (Federal).—A means (authorized by the Agricultural Marketing Act of 1935, as amended) to permit agricultural producers collectively to influence the supply, demand and/or price for a particular crop or commodity in order to improve the orderly marketing of the crop or commodity. Once approved by a required number of producers—usually two-thirds—of the regulated commodity, the marketing order is binding on all handlers of the commodity in the area of regulation. A marketing agreement may contain more diversified provisions, but it is enforceable with respect to those producers or handlers who voluntarily enter into the agreement with the Secretary of Agriculture.

Marketing quota.—The quantity of a crop that will provide adequate and normal market supplies. This quantity is translated into terms of acreage needed to grow that amount and is allotted among individual farms, based on their previous production of that commodity. When marketing quotas are in effect (only after approval by two-thirds or more of the eligible producers voting in a referendum), growers who produce in excess of their farm acreage allotments are subject to marketing penalties on the "excess" production and are ineligible for Government price support loans. For certain tobaccos, a poundage limitation is applicable as well as acreage allotments, when approved by grower referendum.

Multilateral, multinational.—Agreements or programs involving three or more countries—as the General Agreement on Tariffs and Trade—rather than only two countries, which is referred to as bilateral.

Multilateral trade negotiations [MTN].—Negotiations between GATT member nations that are conducted under the framework of the GATT, and are aimed at reducing tariff and nontariff trade barriers. See GATT.

National farm program acreage.—The number of harvested acres of feed grains, wheat, and cotton needed nationally to meet domestic and export use and to accomplish any desired increase or decrease in carryover levels. Program acreage for an individual farm is based on the producer's share of the national farm program acreage.

Net cash income, farm.—The cash available to farmers to meet household expenses, pay farm operating expenses, pay off loans, and purchase capital assets (that is, farm machinery, storage facilities). It serves as an indicator of the short-term financial condition of agricultural producers and their ability to meet current obligations. Net cash income consists of cash receipts from farm marketings of crop and livestock products, other cash income from such farm-related sources as machine hire, custom work and farm recreational activities, direct Government cash and payments-in-kind, less production expenses paid in cash. Excluded are the nonmoney components used to derive gross farm income and net farm income.

Net farm income.—This measure represents the return (both money and nonmoney income) to farm operators for their labor, management and capital invested in their farms after all production expenses have been paid out of gross farm income. It includes income from farm production after expenses as well as income and expense imputations for the rental value of farm dwellings, the value of commodities consumed on the farm, depreciation and inventory changes. Because there have been dramatic swings in the weather and in resultant inventory changes in recent years, net farm income has been more volatile than usual. Net farm income in 1983 accounted for over 35 percent of all income earned by farm families. See also net cash income.

Nonmoney farm income.—A statistical allowance used in farm income compilations to credit farmers with income for the value of farm products used on the farm (instead of being sold for cash) and the rental value of farm dwellings. It assumes farmers otherwise live rent-free on their farm business premises.

Nonrecourse loans.—Price support loans to farmers to enable them to hold their crops for later sale. The loans are nonrecourse because if a farmer cannot profitably sell the commodity and repay the loan when it matures, the pledged or mortgaged collateral (the commodity on which the loan was advanced) can be delivered to the Government for settlement of the loan. Farmers may redeem their commodities by paying off the loans with interest. The loan level also becomes the support price since the Government becomes an alternative to the market.

Nontariff barriers to international agricultural trade [NTB's].—Regulations employed by governments to restrict agricultural imports from all or certain countries, usually to protect domestic producers. Nontariff trade barriers are generally more restrictive than tariff barriers, although the latter, if extremely high, constitute effective barriers. Nontariff barriers include quantitative restrictions, mainly import quotas and embargoes; export subsidies; licensing; exchange controls; state trading; bilateral agreements; and certain rules and regulations on health, safety, and sanitation.

Normal crop acreage.—The acreage on a farm normally devoted to a group of designated crops. When a set-aside program is in effect, a participating farm's total planted acreage of such designated crops plus set-aside acreage cannot exceed the normal crop acreage.

Normal yield.—A term designating the average historic yield established for a particular farm or area. Can also describe average yields. Normal production would be the normal crop acreage planted multiplied by the normal yield.

Ocean freight differential (under Public Law 480).—The difference between the cost of Public Law 480 shipments that are required to be carried on U.S.-flag vessels compared to the cost that would have been incurred had they been carried on lower-cost foreign vessels. The U.S. Government pays this difference either by paying the total freight, if the sale is made under title II of Public Law 480, or by reimbursing the recipient country or private grain company (whichever pays the shipping) if the sale is made under title I of Public Law 480.

Off-farm income.—That portion of farm household income obtained off the farm including nonfarm wages and salaries, pensions, and interest income earned by farm families. Off-farm sources accounted for over 65 percent of all income received by farm families from all sources in 1983.

Oilseed crops.—Primarily soybeans, peanuts, cottonseed, and flaxseed used for the production of oils for cooking, protein meals, and nonfood uses. Lesser oil crops are sunflower, safflower, castor beans, and sesame.

Paid acreage diversion, or paid land diversion program.—A program under which farmers are paid to voluntarily take acreage out of production. Paid diversion authority currently exists for wheat, feed grains, cotton, and rice. The diverted land must be devoted to approved conservation practices. Unlike acreage reduction and set-aside programs, participation in a paid diversion program is not normally a condition of eligibility for other price support benefits.

PIK (Payment-in-Kind).—A program implemented in 1983 to reduce crop production and commodity surpluses, under which producers of corn, wheat, sorghum, upland cotton, and rice were eligible to receive commodities as payment for removing additional acres from production (beyond the amount required under the regular acreage reduction, and paid diversion programs). The concept behind PIK, paying farmers with commodities or in-kind to reduce plantings is not new; it was used for cotton in the 1930's, and for feed grains and cotton in the 1960's.

Poundage quotas.—A quantitative limit on the amount of a commodity that can be produced and/or marketed under the provisions of a Federal price support program. Once a common feature of price support programs, this supply control mechanism now only restricts the production and/or sale of tobacco and peanuts.

Price elasticity of demand.—The relationship between the change in the price of a commodity and the corresponding change in the quantity that is sold. If a small change in the price is accompanied by a relatively large change in the quantity sold, demand is said to be elastic. But if a large change in the price is accompanied by a small change in the quantity sold, demand is said to inelastic. The demand for most farm products is price inelastic.

Price index.—Current price expressed as a proportion to the same price in an earlier time period, commonly called the base period. Monthly price indexes computed by the U.S. Department of Agriculture are the Index of Prices Received by Farmers and the Index of Prices Paid by Farmers for Commodities and Services, Interest, Taxes, and Farm Wage Rates. The ratio of these two indexes is referred to as the Parity Index.

Price support level.—See target prices.

Price support payments.—See deficiency payments.

Prices-paid index.—An index of the prices farmers pay for goods and services (including interest, taxes, and farm wage rates) used for producing farm products and in farm family living. It is referred to as the Parity Index when computed on a 1910–14=100 base.

Production expenses, farm.—Measures the aggregate business cost of farming. The two main components are current farm operating expenses and overhead costs. Farm production expenses are accounted for differently in the farm income measures. Only production expenses paid in cash are included in net cash income, farm. Gross farm income and net farm income include both cash and noncash production expenses. Noncash expenses include such overhead costs as charges for depreciation and other capital consumption associated with farm buildings and other structures, motor vehicles, farm machinery and equipment, and expenses associated with farm operator dwellings.

Productivity.—A measure of technical efficiency, typically expressed as the added output for an additional unit of input or the average output per unit of input, that is, labor, land, capital productivity.

Protectionism.—Excessive protection, or overprotection, of agriculture. Many countries shield their producers unduly from the competition of agricultural imports, virtually, insulating their agricultures from competition. Such protectionism hampers the operation of comparative advantage and often fosters uneconomic domestic production.

Public Law 480.—The Agricultural Trade Development and Assistance Act of 1954, as amended, is often referred to as Public Law 480 or the Food-for-Peace Program. Its primary purposes are to expand foreign markets for U.S. agricultural products and to use U.S. agricultural abundance to combat hunger and encourage economic development in the developing countries. The program makes U.S. agricultural commodities available through low-interest, long-term credit under title I of the act, and as donations for famine or other emergency relief under title II. Title III authorizes food-for-development projects under which the recipient country agrees to undertake agricultural development projects to improve its own food production or distribution. Approved projects are financed through forgiveness of title I loans. Public Law 480 is administered by the Department of Agriculture and the Agency for International Development.

Quantitative restrictions.—Quantitative restrictions are limitations on the quantity or value of a product that may be permitted to enter a country. They are probably the most familiar of the nontariff barriers and include quotas, embargoes, restrictive licensing, and other means of limiting imports.

Quotas.—A quantitative limit placed on the importation of specific commodities. The protection afforded by quotas is more certain than can be obtained by raising import duties as the effect of the latter will depend on the price elasticities of the imported commodities. Quotas, like tariffs, can also be used to favor preferred sources of supply. Quotas have virtually disappeared among industrial trading countries, except among primary products.

Section 22.—Section 22 authorizes the President to prevent imports from undermining domestic farm programs by imposing fees or quotas. Section 22 was added to the Agricultural Adjustment Act of 1933 by amendment on August 24, 1935, and has been amended itself several times since then.

Section 32.—Section 32 of Public Law 320, 74th Congress, was enacted to widen market outlets for surplus agricultural commodities as one means of strengthening prices received by farmers. It authorizes three types of programs: (1) To encourage the exportation of agricultural commodities and products thereof; (2) to encourage domestic consumption of commodities or products by diverting them from the normal channels of trade and commerce or by increasing their use among persons in low-income groups; and (3) to reestablish farmers' purchasing power by making payments in connection with the normal production of any commodity for domestic consumption. Section 32 programs are financed by a permanent appropriation equal to 30 percent of the import duties collected on all items entering the United States under the customs laws, plus any unused balances to the extent of $300 million. Funds have been primarily used to support the School Lunch Program and other feeding programs. Perishable commodities that are in surplus are acquired and disposed of through the feeding programs.

Section 301.—A section of the Trade Act of 1974 that authorizes the U.S. Government to challenge unfair foreign trade practices and seek their removal. Actions such as the improper use of domestic or export subsidies by other nations, which have harmed U.S. agricultural trade, may be countered under the authority granted by section 301.

Set-aside.—A supply control provision of price support programs that requires a designated percentage of a farm's acreage that is planted to a program crop be devoted to soil conserving uses (such as grasses, legumes, and small grain which is not allowed to mature) in order to be eligible for price support payments and loans.

Shippers' export declaration.—A form required by the Government for the compilation of statistics on trade. It is necessary on practically every commercial shipment leaving the United States with the exception of mail shipments of small value.

Strategic grain reserve.—National grain stocks held in reserve intentionally by Government programs for the purpose of meeting future domestic and international needs. See food security wheat reserve, farmer-owned grain reserve.

Supplementary imports.—Farm products shipped into this country that add to the output of U.S. agriculture and are at least partially competitive with domestically produced farm commodities.

Examples include cattle, meat, fruit, vegetables, and tobacco. See complementary imports.

Target price.—A price objective determined by law to be adequate for farmers to meet the cost of production. Sometimes called the guaranteed price level, the target price becomes the income support price. The Government bolsters farm income by making deficiency payments to qualifying farmers when national average market prices fall below the target. See deficiency payments.

Tariff.—A tariff is a list or schedule of taxes. In international trade, these taxes must be paid to a government on selected imported or exported goods. The tax on a specific item on a tariff list is a duty, however, in recent years the terms "duty" and "tariff" have been used interchangeably. The Tariff Schedules of the United States [TSUS] list hundreds of items on which the United States levies duties. These items include automobiles, wine, cameras, farm products, and many others. A specific duty is assigned to each item on the schedule. Tariffs may be protective—designed to protect domestic production against the economic effects of imported goods, as contrasted with revenue—established to bring revenue to the Government. See duty, levy.

Transshipment.—"Transshipment" refers to the primary export of U.S. farm products to certain countries—notably Canada and the Netherlands—and their further shipment to other countries. Unless there is adjustment for transshipment, export statistics reflect a distorted picture. In 1969, for example, $710 million worth of U.S. farm products was exported to Canada. However, about $200 million worth of that total was subsequently transshipped to other countries. Therefore, statistics on exports to Canada were adjusted downward to about $510 million, and totals for various importing countries, mainly in Europe, were adjusted upward by an aggregate of about $200 million. Often U.S. shippers' export declaration indicate Canada or the Netherlands as intermediate destinations since final destination is not known at time of export. Such shipments are held in bond at Canadian or the Netherlands' storage elevator for subsequent transshipment. When final destinations are known, the export statistics can be "adjusted for transshipment."

Value-added products.—Generally refers to products that have been increased in value through some form of processing. Such products include wheat flour, soybean oil, and beef. See high value products.

World price.—The price at which commodities will move in international trade under existing marketing conditions. The concept, "world price," lacks precision unless quality, location, and other factors are specified, as has been done in the examples that follow.

The expression is sometimes thought of as the c.i.f. price of an imported agricultural commodity at the principal port of importation of a major importing c.i.f., United Kingdom ports, bulk basis, as quoted daily by the London Terminal Association, is generally considered a world price. An export price is sometimes thought of as a world price. For example, the spot price sugar, 96 degrees, bulk, Greater Caribbean Area, f.o.b. and stowed, as quoted daily by the Spot Price Committee of the New York Coffee and Sugar Exchange is often considered to be a world price. The Caribbean price is, of course, on a lower level than the United Kingdom price mentioned above—the difference between the two series representing in large part the cost of ocean freight.

Some traders consider the cash price of No. 2 Yellow corn at Chicago to be the world price for that commodity.

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